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# WORLD ECONOMIC SURVEY

NINTH YEAR

1939/41

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# WORLD ECONOMIC SURVEY

## NINTH YEAR

1939/41

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### PREFACE

This *Survey* covers the period of almost two years, from the autumn of 1939 to the summer of 1941. It is concerned with a world at war. Although all countries have not been and are not immediately involved, the central thread and the expanding web of the facts recorded are the economics of warfare. No country is unaffected by this conflagration; but in all countries economic activity continues. It continues in a changed form, and in most areas for purposes other than immediate social welfare. The essence of war economy is the sacrifice of that immediate welfare to other needs or ambitions. In the earlier chapters of this volume, the means by which that change has been effected are described; in the later chapters, the effect of these changes on various forms of economic activity in the war areas and elsewhere are considered.

The ultimate object of war economy is always the same, although the immediate objects may differ according to the economic power and pattern of the country, and according to the degree of risk that the war is considered likely to involve. In all cases, the ultimate object is to direct the available resources to the production of such goods and services as are necessary to the successful conduct of the war.

The whole economy of a country endeavouring to achieve this result is of necessity more or less fundamentally changed. For a peace economy in a non-collectivist state is based on the successful anticipation of the future wants of the population, the criterion of success being the gain by the aggregate of producers of such receipts for their efforts as will enable them to repeat the process on a gradually expanding scale. This criterion normally takes the form of profits. Under a war economy, such foresight regarding future wants by the entrepreneur ceases to be the major instrument of success. Demand—

the wants to be filled—is to an increasing extent determined by the government and made known before the productive process begins. The stimulus of profits is partly or wholly removed.

The power of the government to acquire the goods and services it requires is obviously conditioned by national productive capacity and by the government's ability to borrow abroad or sell abroad existing claims to wealth. There are, in fact, four possible sources of supply the tapping of which may require somewhat different methods:

(1) The unutilized productive resources. These unutilized resources may consist of land which is uncultivated or under-cultivated, mechanical and other instruments of production that are not fully employed, human beings who are unemployed or under-employed. These are not wholly independent resources. Machinery might be employed 24 hours a day, if labour were available to work it in shifts; the effective capacity of labour will depend on the technical efficiency of the machinery. Nor is the maximum of the resources available, granted any composition of those resources, an absolute unvarying amount. Workers can efficiently work for short periods hours so long as to undermine their efficiency over a long period; crops may be forced out of land for a few years by methods of tillage which would defeat the object of the government if a prolonged war effort is needed. In determining the extent to which it can utilize its resources, the government has therefore first to frame a judgment as to the probable duration of the war or the degree of risk at any moment of time.

(2) Existing resources actively employed on the production of goods and services either to meet civilian needs at home or capital exports. As these resources are in active use, they can only be made available to the government by curtailing domestic consumption or capital exports. The greater the national income per head of population and the greater the amount of non-essential expenditure, the greater will be the government's power to divert the resources of production to war ends.

(3) Consumable capital. Such capital will take various forms. A country can live on its capital during a war by consuming stocks of food and raw materials, by not replacing the wear and tear of its machinery, roads, buildings and other means of production, by allowing the clothes and boots and household equipment, etc., of its population to wear out, by allowing the land to get out of good heart. It can sell its foreign investments, its gold and other wealth abroad and obtain in exchange the implements and material of war it requires.

(4) Finally, a government may make use of its own credit. It may borrow abroad and leave it to future generations to repay.

The problem, then, of war economy to all governments, the problem around which so much of the economic history of the last two years has centered, has been how to harness and activate these various resources for use in the conduct of war or for use to keep war at bay.

The means of achieving this object, the possible instruments of policy, are manifold; but they fall naturally into two or three classes.

In the initial stages of transition from a peace to a war economy, governments must resort to borrowing and generally do resort to some measure of deliberate credit expansion. Only if a war economy had been planned very far in advance could borrowing at the outset be avoided, and in fact there is no example in history of this. The reason is obvious; the government requires to obtain purchasing power more rapidly than it could by means of increased taxation. Even when a war chest in gold has been accumulated in advance, such as the German Spandau tower chest in 1914, borrowing has not been avoided. But the extent of borrowing affords no measure of the degree to which the cost of the war can be passed on to future generations. In fact, a government can only live on the future to the extent that it taps the last two of the resources enumerated above, that is by letting its capital assets of all kinds run down or checking the normal peacetime growth of equipment by selling such assets abroad or purchasing abroad on credit.

While these are the only possible means by which the goods and services obtained today can be paid for later, governments may, of course, by unwise policies, commit the future to the most serious indirect costs.

By excessive borrowing, they may create a debt structure which may cause insupportable strains after the war, owing to the changes in the distribution of income which will be caused if prices fall; by inflation they may jeopardize the whole social fabric; by excessive utilization of their capital resources they may create a state of poverty from which recovery must be protracted and painful and for which the industrial equipment that remains is wholly ill-adapted. It is for these reasons that during this war governments have in most cases endeavoured successfully or unsuccessfully to avoid inflationary means and reduce borrowing to a minimum, and have dovetailed into their plans to meet the imperative and immediate war needs measures to facilitate recovery after the war.

In the first stages of transition to war economy, borrowing for the reasons given is not avoidable, and in so far as unutilized resources are being brought into use, credit expansion need have no inflationary influence on prices. But great care is required in determining whether the unutilized resources available in any country are of such a nature as to obviate the inflationary effects of credit expansion and in de-

termining how long those resources will last. Resources may be unutilized because of a general redundancy at any moment; certain resources may equally well be unutilized because of a shortage of others. Labour may be unemployed on account of a lack of certain types of raw materials or machinery, machinery idle for lack of labour. In such circumstances the use of borrowed funds may produce inflationary effects if there is a failure on the part of the government to make good the deficiencies by means other than that of offering higher prices than the rest of the community for the particular resources the supply of which is restricted. It is these other means to assure an adequate and balanced supply of all required resources of labour, material and equipment by direct control and intervention that constitute the first concern of governments in organizing war economy.

When governments pass from the first to the second class of available resources—that is, to the productive equipment already in use—instruments of policy other than borrowing become clearly preferable, and the need for direct control and intervention increasingly necessary. For at this stage, governments can only obtain what they require by restricting civilian consumption or investment to meet subsequent civilian consumption. Such restriction on the one hand, and the stimulation of the productivity of resources on the other, are the two essential problems of war economy. Restriction may be voluntary or directly or indirectly constrained. When it is voluntary the government must borrow the purchasing power saved by the individual; when it is directly constrained the government must tax or by some other means prevent spendable income from accruing. But it may be indirectly constrained in the first instance by curtailment of the individual's opportunity to purchase—the government may then either tax or borrow the unspent income. During the present war, opinion in Europe evolved rapidly in favour of compulsory restriction of civilian consumption. Voluntary restriction, it is felt, is open to two major objections: one of equity; the other of expediency. In the absence of compulsion, there will be in every community a certain number of citizens who will fail to carry out their social obligations, even in time of war, will fail to restrict their spending and will weaken the war effort. By borrowing, the government at once incurs on its own credit, which, like all other assets, should be conserved, and incurs the risk of rendering the whole financial structure too rigid owing to the edifice it creates of fixed money obligations. Resort has therefore been had to an ever increasing extent to taxation in almost all belligerent states and in states threatened by war.

Private expenditure has been controlled not only by taxation but in certain countries by two methods which, although closely intercon-

nected, are in fact distinct. On the one hand, the consumer has been prevented from spending more than a limited amount on certain classes of goods. He has been rationed. His right to buy food, clothes, this commodity or that has been limited to the amounts or values decided by the government. Such rationing alone would not necessarily limit his expenditures, were he free to obtain what he would with the rest of his income or by expending his capital. Indeed, in the past, rationing has been looked upon rather as a means for assuring that all should share equally in a reduced supply than as a means for curtailing consumer's expenditures in general. It has that latter effect to some extent in all circumstances; but as a means to this end it becomes really effective if, in addition, the government prevents the production and sale of other commodities or assets to which civilian demand might be directed. This governments have accomplished by a variety of direct controls over the instruments of production, priorities for government orders, requisitioning of plant, rationing of raw materials, restraint of stock exchange operations, etc.

The surplus of unspent income thus created, the government can tax or borrow. It can increase the surplus by reducing rationed or other consumer's supplies; but it cannot borrow in excess of that surplus. When it endeavours to do so, as governments have, the effect is to force the public to borrow from the banks what they lend to the governments and to create an inflationary expansion of credit by this or other similar means such as direct borrowing by the government from the banks.

On the other hand, governments can by various means prevent the increase of consumer's income. Price control, rent control, wage control, the limitation of profits, policies designed to keep down the cost of government borrowing, anti-inflationary measures of all sorts checking the multiplier effects of private expenditure are means to this end—means, some of which have been extensively used both in this war and the last.

The second of the two means to restrict private expenditure referred to above is new. It consists of the introduction of a plan of compulsory temporary saving under which a part of the taxes paid by lower income groups are credited as savings deposits utilizable after the war. One of the objects of this scheme, which is explained more fully in Chapter IV is to assure that the consumer has purchasing power available at the end of the war with which he can at once satisfy his immediate wants as restrictions on consumption are removed and by exercising this power facilitate the transition from war to peace economy.

Theoretically, it should be possible for the government to absorb in taxation all the consumer's purchasing power in excess of the

amounts which either on grounds of maintaining personal efficiency for war ends or for other social reasons it considers it desirable that the individual shall spend. In practice, this is impossible. Even when, for instance, the rations allowed vary according to the type of work performed, those rations must be averages on which some will save. Some persons will consume no sugar, others will not purchase tobacco; and when the rationing is effected by income limitation, not by quantitative control, the possibility of individual savings on the reduced incomes will be greater. Furthermore, in so far as the government is living on the national capital by creating conditions under which firms are unable to make good wear and tear, it may well be considered desirable to borrow the equivalent of that capital loss. For firms will require to set aside amortization reserves for the re-equipment of their plant at the end of the war. But to calculate with mathematical accuracy the amounts which will be required for this purpose, the amounts which the firms should be allowed to save, is obviously impossible and, just as in the case of individual expenditures, some will save more and others probably less than will be finally required.

It follows, therefore, that quite apart from the fact that taxation receipts will only begin to flow in some time after taxes have been voted, while funds in war-time are required with pressing urgency, some amount of borrowing is inevitable.

As already suggested, capital consumption may take various forms, into the details of which we need not enter here. But it is well to remember that it is likely greatly to exceed actual wear and tear of existing plant or consumption of current stocks. For instance, capital invested during war-time in the erection of plant for the production of munitions which becomes redundant at the termination of hostilities and can be converted to no other use, is effectively consumed. Such capital has to be written off as an ultimate loss and it is a common practice to facilitate such writing off within very short periods of a few years by allowing firms to set aside large obsolescence reserves from their gross receipts.

The most obvious form of national capital consumption is of course the sale of gold and securities and other property abroad. Such sales constitute a net loss of national capital and, if the assets are not in the effective ownership of the government, will be reflected in an equivalent expansion in the domestic national debt.

In all cases it is the loss or attrition of assets whether at home or abroad (or failure to increase them at the normal rate) that constitutes that part of the costs of the war which is directly borne by post-war generations, and not the increase in domestic debt. The service of the debt after the war will necessitate a transfer of pur-



chasing power from one individual to another, and such transfers may have indirect effects on financial organization and on the smooth working of the national economic apparatus. But the service of the domestic debt does not involve any direct deduction from the national income as does the service of a foreign debt.

If governments have recourse to the last source of purchasing power mentioned above, namely foreign loans, the service of those loans will, of course, constitute a direct charge on future income. Such international financial operations are related to the problems of war economy in the current restricted sense of that term only in as much as the measures of war economy adopted affect the borrowing power of the country in question.

There are no resources other than those mentioned to which governments can have recourse to meet their war needs. When those needs outrun the available resources, or when governments fail in their efforts to direct resources to meet them, inflation results, prices rise rapidly, and a form of taxation is thus imposed on the community which, while falling most heavily on those with fixed incomes, is generally regressive in its incidence.

Here it is only possible to consider these various resources, in the most general terms. In practice, as the various chapters of this volume show, the efficiency of each one of them may be enhanced or diminished. Labour may be trained to new skills, new inventions or better organization may revolutionize factory output; the public's readiness to accept sacrifice, the will to work to win may make (or mar) the success of governmental efforts.

\* \*  
\*

Before the war, it was the practice of the Economic Intelligence Service to publish each year a series of specialized memoranda, in certain of which world and continental indices of production, trade, stocks, etc., were calculated. These memoranda were summarized and synthesized in the *World Economic Survey*. Owing to the insufficiency of the statistical information furnished by governments, such a procedure is no longer possible. The present *Survey*, therefore, instead of being the work of a single individual utilizing the resources of an organization and the analytical work already done by that organization, is a collective effort based directly on such national sources of information as are still available. Certain of the later chapters have been deliberately written in such a manner as to reflect to some extent the tradition of the specialized memoranda, and, in the absence of such memoranda, it has been thought desirable to

make some of the tables more detailed than has been the practice or than was necessary when the *Survey* constituted the apex of a pyramid of more specialized studies. On the other hand, as the period covered is almost two years instead of one, the treatment of the subjects considered is necessarily somewhat more general.

A. LOVEDAY,  
*Director of the Economic,  
Financial and Transit Department.*

Economic Intelligence Service,  
League of Nations,  
July, 1941.

## CHAPTER I

### TRANSITION TO WAR ECONOMY

#### PRINCIPAL CHARACTERISTICS OF THE TRANSITION

The outbreak of war in Europe at the beginning of September 1939 confronted that continent and indeed all parts of the world with economic problems of unprecedented magnitude and urgency. The profound dislocation of international economic intercourse affected areas far removed from the scene of the conflict. In the countries more directly involved, the mobilization of men for the armed forces threatened to paralyse economic activity. On the other hand, the highly mechanized character of modern warfare presented enormously increased demands upon the productive system. To a far higher degree than 25 years earlier, material equipment had come to play a vital and decisive part in military operations on land, at sea and in the air. This meant, in fact, that war had become largely a matter of war economy.

In a number of countries, therefore, measures had to be adopted immediately to obtain a fuller utilization of the available labour force by the lengthening of working hours, the introduction of training schemes, the employment of women, etc., in order to offset the mobilization of workers of military age and to raise the national output to the highest possible level. At the same time it became urgently necessary to divert an increasing proportion of aggregate output to the production of armaments. For this purpose ordinary private consumption had to be checked and private capital investment curtailed if not entirely suppressed.

The required diversion of the flow of goods and services was brought about partly by financial methods: it was effected, that is to say, partly by the business world itself in response to the money demand represented by the vastly increased expenditures of the State, covered by higher taxation and by borrowing. But to a very considerable extent resort was had to direct command and control on the part of the State to impel and accelerate the transformation process. The employment of labour, the supply of raw materials, the use of industrial plant and the distribution of consumers' goods were all subjected in varying degrees to centralised regulation by

government agencies. The methods of direct control adopted in these various fields, as well as the financial methods operating through the control of money flows, are described in some detail in the succeeding chapters.

The economic upheaval caused by the outbreak of the European war was not, of course, confined to the belligerent States. Neutral countries outside Europe—the Latin-American republics, for example, and also to some extent the United States—felt the effect of the war rapidly and directly, as their foreign trade was immediately subjected to such conflicting influences as the Allied blockade of Germany, the inception of large war purchases by the United Kingdom and France, and the introduction of exchange control in these and other countries at the beginning of the war.

The European neutrals, on the other hand,—such as: Belgium, the Netherlands, Sweden and Switzerland—felt compelled in view of their proximity to the theatres of war to make every effort to strengthen their defences and to complete their military preparations. These neutral countries were thus, from the economic point of view, in much the same position as the belligerents. They, too, were faced with the need for adjustment to a war economy. For them, the problem, if at first less acute in degree, was the same in essence as in the belligerent States. The problem of war economy covers, then, a much wider area than the countries actually engaged in hostilities at any moment.

Prior to the spring of 1940, intensive military operations were confined to the German campaign in Poland, the war between Finland and Russia and the Japanese campaign in China. The absence, at that time, of large-scale military destruction in Western Europe undoubtedly facilitated the transition, but it was not otherwise of great economic significance.

The fact that the world had long been preparing for war played an important part in rendering the economic transition less sudden and disturbing than it might otherwise have been. For several years prior to September 1939 international tension had kept increasing; hostilities had already broken out in different parts of the world; acts of aggression had multiplied, and hopes of a European settlement had steadily receded. As a result, the world's industrial activity had come to be dominated to an increasing degree by government expenditures on armament; and in certain countries war preparations had already proceeded to such a degree that the actual transition to war required relatively little economic reorganisation.

There is no need to refer at length here to developments preceding the outbreak of war. The last edition of the *World Economic Survey*, published in September 1939, gave a full description of conditions on the eve of the war, and brought out clearly the extent to which economic mobilization for defence requirements had come to dominate the scene. It will be recalled that, in the great majority of countries, trade and production were vigorously expanding when war broke out. The recession which developed in 1937, and which was particularly severe in the United States, was halted in the following year and gave way to an appreciable recovery. This recovery in economic activity was largely based on armament expenditure. Only in the United States of America and in certain countries dependent on the American market was the recovery predominantly due to "peace-time" factors.

Preparation for war was not confined to the industrial system. Currencies, money markets and stock exchanges underwent a complete "dress rehearsal" in September 1938.<sup>1</sup> After that, banks kept themselves in a highly liquid condition, and security markets remained, on the whole, depressed, reflecting the pessimism with which the future was viewed in spite of the growing volume of business activity. Thus, when the conflict actually began, the search for greater liquidity proved to be relatively moderate, and the monetary and financial disturbance was, accordingly, much less than might have been expected.<sup>2</sup> In contrast to 1914, no country found it necessary to impose a general credit moratorium.

In 1914, apart from the initial disturbance in the financial markets, economic activity continued at first with little change. "Business as usual" was a popular slogan; and there was a general expectation that the war would be short. The real transition to war economy took place later. In 1914, then, the transition from peace to war was relatively smooth, only because it was postponed; whereas in 1939 the transition was relatively smooth because it had already been accomplished to some extent before the war.

The world had long been preparing for war. But there were great differences in the degree of economic preparedness which had been reached in different countries in 1939. At one end of the scale, there were such countries as Germany, Italy and Japan, whose economy

<sup>1</sup> For the monetary aspects of the "Munich crisis," see *Money and Banking*, 1938/39, Vol. I (Monetary Review), pages 42ff.

<sup>2</sup> See *Money and Banking*, 1939/40, Vol. I (Monetary Review), pages 34ff.

was already on a war footing. At the other, there were, even in Europe, a number of countries, especially among those that remained neutral at the outset, where the process of economic mobilisation had only just begun.

Japan, of course, had been at war for over two years. Not only had she carried out a far-reaching adjustment to war conditions—reflected, as is shown in Diagram 3 (page 32, below), in a decline in the output of consumption goods and a rise in the production of “investment” goods—, but she was even beginning to show signs of fatigue in her economic system. As will be observed in the last section of this chapter, Japanese industrial output was declining in the second half of 1939.

Italy had begun her Ethiopian campaign four years before, in the autumn of 1935. This and, subsequently, her participation in the Spanish war (1936-39) maintained her economy under the constant pressure of military requirements. These requirements were further increased by the Italian declaration of war on June 10th, 1940, but the preceding nine months of “non-belligerence” had afforded her an opportunity to carry out the necessary economic adaptation.

The German economy was seriously affected by the allied blockade; but the organisation of the country for war was so developed that comparatively few changes in economic policy were made necessary by the outbreak of hostilities. The four-year plan for increased self-sufficiency was essentially a plan of war economy. It was not confined to the production of substitutes and the utilisation of low-grade domestic materials. The plan involved a reorganisation of the entire national economy under the direction, to a large extent, of military experts. It may be useful to recall that this plan was introduced in the autumn of 1936, three years before the armed conflict began.

On the other hand, the outbreak of war had serious effects on the economies of the smaller European states which preserved their neutrality in 1939. The need for mobilisation and increased expenditure on national defence disturbed their supplies of labour and their budgetary and monetary conditions at a time when the allied blockade, the difficulties of transport and the changes in the foreign purchases and sales of the belligerent countries completely transformed the conditions for their foreign trade. This combination of circumstances called for the imposition of a number of emergency economic controls, which were relatively little developed in these countries when war started.

But the most far-reaching economic reorganisation which the situation demanded in the last months of 1939 was in the allied countries. As will be seen in later sections of this volume, particularly in the chapters dealing with Government controls, the transition from peace- to war-time economies necessitated fundamental reorganisation in France and the United Kingdom, and also in the British Dominions in spite of their geographical remoteness from the scene of conflict. In the United Kingdom, a five-year plan of rearmament finance was announced in February 1937. In France, defence efforts were speeded up in April 1938. Rearmament in these countries began relatively late and was pursued at less than full capacity. Owing largely to the growing inflexibility of the price system, the immobility of the factors of production, and the reduced effectiveness of the profit motive in war or "near-war" conditions, war economy has become more a matter of direct control over commodity flows and less a matter of financial methods. But experience has shown that in democratic communities relying on free business enterprise the adoption of compulsory controls before the actual outbreak of hostilities is less easy than elsewhere. The transition problem, accordingly, presented itself with particular intensity in the democratic states involved in the struggle.

The position of the United States in the world economy was naturally somewhat modified by the war. In time of peace, the course of business in the United States had normally exercised a dominating influence on economic activity in the rest of the world. Now that economic activity in the rest of the world was so largely determined by the necessities of war, the influence of business conditions in the United States—though still important—had no longer the same significance. Indeed, the United States itself was subjected to influences emanating from the war economy of the outside world. When allied purchases, for example, failed to develop on the scale anticipated, the sharp upswing which occurred in the United States in the autumn of 1939 gave way to a temporary recession. For a time, the United States remained substantially a "peace economy." In May and June 1940, however, foreign war purchases were increased, and plans were laid down for large-scale domestic rearmament.

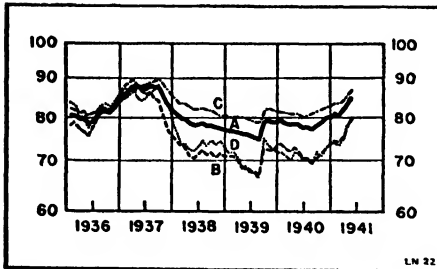
But even in war, the business situation in the United States remained important, if not determinant, for the rest of the world. The expansion of the American market enabled a number of countries to increase their exports to the United States and thus helped them to finance some part of their heavy purchases of the products which

*Diagram 1.*

WHOLESALE PRICES IN THE  
UNITED STATES.

(1926 = 100.)

- A: All commodities.
- B: Raw materials.
- C: Finished products.
- D: Foods.



they required for purposes of national defence. The considerable rise in raw material prices which took place in the last months of 1939 was in large part due to the expansion of demand for such goods in the American market. This development favoured the countries exporting such materials, compensated them for the loss of other markets, and thus mitigated, at least temporarily, the adverse repercussions of the European war on primary producing countries outside Europe.

GENERAL DEVELOPMENTS IN THE LATTER PART OF 1939.

For many years before 1939, the growth of national restrictions on foreign trade and exchanges, the formation of special economic or monetary "blocks" of countries, the growing State control of economic life for purposes of national defence, and the various attempts to promote economic self-sufficiency were leading to a progressive disintegration of the world economy.<sup>1</sup> It was becoming increasingly difficult to generalize about economic developments for the world economy as a whole and increasingly important to examine the divergences of economic developments in various countries or groups of countries. The outbreak of war in Europe naturally intensified this tendency. Nevertheless, some important international inter-connections remained between the different countries; and many countries were affected by the war in substantially similar ways. As a result, economic developments in many belligerent and neutral countries showed a surprisingly large degree of uniformity in the last months of 1939.

In the first place, as the following figures show, there was an almost universal rise in prices in the months immediately following the outbreak of war. One of the factors contributing to this rise was the revival of demand for raw materials on the American market. The average rise in the level of prices in the United States was moderate, amounting to only about 5%; but there were considerable

<sup>1</sup> Cf. *World Economic Survey, 1938/39* (League of Nations), pages 107-110, and pages 185-187.



*The Movement of Wholesale Prices between July 1939  
and January 1940.*

Percentage increase (+) or decrease (—) from July 1939 to			Percentage increase (+) or decrease (—) from July 1939 to		
	Oct. 1939	Jan. 1940		Oct. 1939	Jan. 1940
Belgium.....	+23	+39	Turkey.....	— 3	+16
Denmark.....	+18	+39	Greece.....	+ 5	+14
Roumania.....	+11	+31	Canada.....	+ 9	+13
India.....	+18	+30	Peru.....	+ 3	+11
United Kingdom.....	+13	+28	Un. of South Africa ..	+ 5	+ 9
Sweden.....	+13	+24	Spain.....	+ 4	+ 9
Netherlands.....	+16	+23	Hungary.....	+ 4	+ 8
Argentina.....	+15	+21	Chile.....	+ 6	+ 7
Norway.....	+11	+21	Bulgaria.....	+ 3	+ 6
Yugoslavia.....	+ 4	+21	United States.....	+ 5	+ 5
Switzerland.....	+13	+20	New Zealand.....	+ 2	+ 5
Portugal.....	+12	+20	Australia.....	+ 6	+ 2
Japan.....	+ 8	+19	Germany.....	± 0	+ 1
Estonia.....	+ 4	+16	Mexico.....	+ 3	± 0

risers in the case of certain primary products. As is shown by the accompanying diagram, this upward movement was very short-lived; it came to an end in October. From October 1939 to January 1940 the official index of wholesale prices in the United States showed, on balance, no change; and in the early months of 1940 there was even a small downward movement, reflecting the temporary recession which then took place in industrial activity and inventory accumulation. Similar movements were observed in certain other countries outside Europe. Thus in Australia and Mexico, as is shown by the figures above, prices relapsed appreciably between October and January, and in Chile they remained practically unchanged.

The price rise in many European countries, especially in those largely dependent on overseas supplies, was much greater than in the countries just mentioned. The rise in raw material prices on the free American market made itself felt to some extent in Western Europe. But, on the whole, difficulties on the supply side seem to have been of greater importance in the price movement in European countries. Increased shipping freights and insurance costs were largely responsible for the sharp rises which occurred in the local prices of primary commodities in many countries of Europe; and in France, the United Kingdom and other members of the "sterling area," a further factor raising the prices of imported products was the depreciation, in terms of dollars, of some 15% in the value of the currency in August and September 1939. The temporary decline in industrial production which, as will be seen later, occurred in several European countries at the beginning of the war may have further strengthened

the forces making for a rise. In certain countries, moreover, there was a wave of hoarding purchases at the beginning of the war. In Germany, it should be noted, the continuation of rigid price control and the imposition of a general rationing scheme prevented any significant upward movement of the official price index.

Another tendency which was almost universal in the last months of 1939 was an increase in the note circulation. This was due to two factors: first, a general monetary expansion caused by actual or anticipated war expenditures and accompanied by rising prices and turnover, and, second, a strong propensity on the part of the public to convert bank deposits into cash. Increases in note circulation as part of general monetary expansion took place in varying degrees in such countries as Germany, Japan, the United Kingdom and the United States. Monetary expansion was, in fact, practically universal in the latter part of 1939. But there were a number of countries where the increase in the note circulation came about largely as a result of deposit withdrawals and currency hoarding—as a result, that is, of a change in the composition rather than the aggregate of the monetary supply. In Belgium, Egypt, Finland, Greece, Hungary, Latvia, the Netherlands, Norway, Palestine, Roumania, Sweden and a number of other countries the increase in note circulation in the autumn of 1939 was accompanied by a sharp decline in deposits at commercial or savings banks.<sup>1</sup>

*Changes in Note Circulation between July 1939  
and January 1940.*

Percentage increase (+) or decrease (–) from July 1939 to			Percentage increase (+) or decrease (–) from July 1939 to		
	Oct. 1939	Jan. 1940		Oct. 1939	Jan. 1940
Denmark.....	+15	+38	Canada.....	+23	+14
Turkey.....	+34	+34	Australia.....	+ 9	+14
Palestine.....	+48	+33	Greece.....	+25	+13
Germany.....	+24	+33	Switzerland.....	+17	+13
India.....	+18	+33	Chile.....	+ 2	+11
Yugoslavia.....	+12	+33	New Zealand.....	+ 7	+10
Sweden.....	+22	+32	Hungary.....	+17	+ 9
Bulgaria.....	+53	+31	Ireland.....	+ 8	+ 7
Japan.....	+10	+29	Netherlands.....	+ 9	+ 7
Egypt.....	+33	+24	United Kingdom.....	+ 4	+ 5
Belgium.....	+18	+24	United States.....	+ 4	+ 5
Roumania.....	+24	+23	Uruguay.....	– 4	+ 4
France.....	+17	+23	Un. of South Africa ..	+ 7	+ 3
Norway.....	+11	+18	Brazil.....	+ 4	+ 3
Portugal.....	+13	+17	Argentine.....	+ 1	+ 2

<sup>1</sup> Cf. Tables 15 and 16, *Monthly Bulletin of Statistics* (League of Nations).

The sudden demand for "cash" as against bank deposits was due to various special circumstances.<sup>1</sup> In some countries, as stated before, there was a wave of retail buying for hoarding purposes, and larger amounts of currency were required to deal with the increased turnover. An important reason for larger cash requirements was, of course, the general or partial mobilisation of armed forces. The evacuation of women and children or the mere prospect of such evacuation had a similar effect. The actual or anticipated separation of families tended to increase the number of separate cash holdings and so the aggregate of cash required.

This demand for greater cash liquidity, it may be noted, was a typical transition phenomenon. The disturbance arising from it was, on the whole, of a temporary kind, associated with the *change-over* from peace to war conditions. Once the demand for liquid resources was satisfied at a higher level, equilibrium in the money market tended to be restored—unless and until new factors arose to alter the public's need or preference for cash.

Indeed, from the above table it appears that in a number of countries the demand for currency subsided appreciably after the first shock caused by the outbreak of hostilities. Between October 1939 and January 1940 the note circulation remained the same in Turkey and showed a net decline in Palestine, Bulgaria, Egypt, Roumania, Canada, Greece, Switzerland, Hungary, Ireland, the Netherlands, South Africa and Brazil.

The mobilisation of large numbers of men and the increased demand for many essential products for military purposes by both belligerent and neutral governments in Europe might have been expected to cause a reduction in unemployment. In fact, however, there seems to have been an appreciable rise in unemployment in many European countries immediately after the outbreak of hostilities. The military mobilisation and other emergency measures caused some dislocation of industry and internal transport. Shipping difficulties in some cases interrupted the normal supply of raw materials for industry. Uncertainty about the future led to the curtailment of certain forms of civilian works, such as building. Unemployment was not reduced below the pre-war level until appropriate measures had been taken to adapt national economies to the new circumstances, until—more especially—the "war industries" had been fully organised and expanded. In the United Kingdom, for example, in spite of the absorption of large numbers of men into the fighting forces and the expansion of industries essential for national defence, unemployment remained above the level of August 1939 until March 1940.

<sup>1</sup> The question is discussed at length in Chapter II of the last "Monetary Review" (*Money and Banking, 1939/40*, Vol. I).

Even in Germany, where the progressive intensification of war preparations had resulted in a scarcity of labour, the outbreak of war caused some disorganisation and led to a temporary increase in unemployment which, owing to the official prohibition against dismissals, showed itself mainly in an increase in short-time in production for civilian needs.

For similar reasons industrial production in a number of European countries at first declined, and later rose again, as the immediate dislocations of the transition were surmounted, as production for defence was increased, and as arrangements were made for longer working hours and greater use of female and juvenile labour to replace the mobilised men. In France, for example, it was officially stated that industrial output fell off in September 1939 to 50% of the level reached in June 1939, and that it recovered to 83% of that level in November 1939; and, as will be shown later, there was a further expansion in French industrial activity in the three or four succeeding months. In a number of other European States, including Belgium, the Netherlands and Sweden, production dropped off immediately after the outbreak of war, but began to recover again during the last few months of 1939. This recovery, of course, was sharply interrupted by the events of the following spring.

Such were the movements in aggregate production in European countries. As regards the composition of total output, it goes without saying that the war entailed far-reaching changes, and not only in belligerent but also in other countries. Such data as are available indicating the contraction of "civilian" and the expansion of "military" industries will be summarised in a later chapter. Here it may be of interest simply to illustrate these tendencies by reference to the statistics on unemployment in different industries in the United Kingdom. Owing to the presence of seasonal variations—which are

### *Unemployment in the United Kingdom.*

Percentage increase (+) or decrease (—)  
from July 1939 to July 1940.

Laundries . . . . .	+27	Commerce, finance and distribu-	
Clothing . . . . .	+22	tive trades . . . . .	—40
Printing, publishing and bookbind-		Chemicals, paints, oils, etc. . . . .	—44
ing . . . . .	+20	Coal mining . . . . .	—44
Professional . . . . .	+ 1	Shipping . . . . .	—45
Hotels, public houses and		Agriculture, horticulture, etc. . . . .	—45
restaurants . . . . .	— 3	Iron and steel manufacture . . . . .	—45
Entertainments, sport, etc. . . . .	—23	Metal trades: electrical and other	—52
Food, drink and tobacco . . . . .	—24	Building, brickmaking, etc. . . . .	—54
Woodworking, etc. . . . .	—25	Motor vehicles, cycles and aircraft	—59
Docks, canals, road transport, etc.	—35	Public works contracting . . . . .	—60
Miscellaneous industries . . . . .	—37	Engineering, etc. . . . .	—63
Total . . . . .	—38	Ship building and repairing . . . . .	—73
Textiles: cotton, woollen, worsted			
and other . . . . .	—39		

naturally greater in some of the individual branches than in the aggregate—the comparison in the table above is made between July 1939 and the same month in 1940.

Changes in unemployment can by no means be taken as a strict measure of contraction or expansion in the volume of employment and output in different industries. The evidence afforded by the above figures is indirect, but it is clear enough. The industries shown at the top of the list, where the number of unemployed increased or declined but little, are typically industries catering for private consumption; whereas most of the industries listed at the bottom, showing the largest decreases in unemployment, are essential for national defence.

The preceding description of general tendencies during the transition period has been confined, for the most part, to European countries. Mention may now be made of certain of the changes that took place in international trade, and particularly in the trade of primary producing countries outside Europe. The Allied blockade profoundly modified the trading position, not only of Germany, but of all the countries for which trade with Germany was important. Trade was restricted by difficulties of transport and by the introduction of controls in belligerent and neutral countries designed to prevent the export of essential commodities and to restrict the import of luxuries. At the outbreak of war there was therefore an immediate fall in the trade of European countries. After a brief period of reorganisation, however, a substantial rise occurred in the imports of some European belligerent and neutral countries of products necessary for the prosecution of war or useful for the formation of stocks, even though part of the rise in import values was merely a reflection of the rise in prices. Thus, for example, in the United Kingdom, Switzerland, the Netherlands and the Scandinavian countries, the rise in import prices combined with heavy purchases for national defence led to a considerable excess of imports over exports at the end of 1939. The corresponding increase in exports and in export surpluses occurred largely in the primary producing countries outside Europe. Fourteen such countries are included in the following table, comparing the import and export values of the last three months of 1939 with the same period a year earlier.

It will be seen that exports increased in all of these typical raw-material-exporting countries. Imports increased much less, where they increased at all; in half the number of countries they declined. In many cases, however, this improvement in trade balances was very short-lived. Especially after the closing of a growing number of European markets in the second quarter of 1940 the trading position of some of these countries, notably in Latin America, tended to be-

*Changes in Imports and Exports of Primary Producing Countries between the last quarter of 1938 and the last quarter of 1939.*

Percentage increase (+) or decrease (-).		
Country	Imports	Exports
British Malaya.....	+36	+79
Ceylon.....	+ 5	+48
Cuba.....	+27	+42
Egypt.....	-18	+30
Union of S. Africa.....	+10	+29
Argentine.....	+ 2	+29
Netherlands Indies.....	-11	+28
India.....	-10	+18
Brazil.....	+ 2	+11
Chile.....	-20	+11
Colombia.....	+ 3	+ 7
Australia.....	- 9	+ 3
Peru.....	- 7	+ 2
New Zealand.....	-34	+ 2

come less favourable. These later tendencies are dealt with in Chapter VIII.

Economic developments in the transition period, as has just been seen, were marked by a certain degree of uniformity. That there was also some similarity between Government measures adopted in different countries has already been stated and will be shown more fully later. Countries involved in or closely affected by the war naturally reacted to the situation in somewhat similar ways. There was, for example, an increase in the burden of taxation after the outbreak of hostilities; and there was, of course, a great spread of State intervention in the form of consumers' rationing, raw-material controls, industrial planning, exchange restrictions, etc. These various aspects of war-time Government policy will be reviewed in the succeeding chapters; it would be of little interest to discuss them here with reference to the transition problem only.

#### SPECIAL PROBLEMS IN CERTAIN COUNTRIES.

There were, then, certain similarities in the change-over from peace to war conditions in different countries; but the differences were at least as significant. Each country, while sharing in some degree in some of the more general tendencies, was also faced with special problems and difficulties of one kind or another in the course of the transition. The following notes are intended to illustrate briefly a few of these more special problems.

In England, for example, it was the problem of prices which caused some anxiety in the early months of the war. As the table on page 19 shows, the level of British wholesale prices rose by 28% in the

six months from July 1939 to January 1940. The figures in that table are not, of course, strictly comparable, as the composition of the national price indices varies. Yet it is significant that the United Kingdom stands among the countries which showed the biggest increase.

There were certain special circumstances to account for this. Imports constitute a relatively high proportion of the total supply of commodities in the United Kingdom; and the cost of imported goods went up sharply at the beginning of the war. Between August 25th and September 4th, 1939, the sterling cost of the dollar rose by 16%, the official rate of exchange being dropped from \$4.68 to \$4.03; the unofficial rate quoted in New York, which was also relevant to some extent to the cost of imports, depreciated even more.

Secondly, as may be seen from the table below, there was a sweeping increase in freight rates, due to the increased costs of insurance, labour, fuel, etc. In the spring of 1940 British shipping freights were on the average four times as high as just before the war, in spite of the strict Government control introduced in the autumn of 1939. The importance of this factor may be illustrated by estimates published in *The Economist*, according to which freight rates represented, at the beginning of 1940, about 24% of the retail price of bread, from 6¼% to 7½% of the retail price of frozen beef, about 5½% of the retail price of sugar, from 18% to 20% of the price of iron ore, and about 37½% of the price of scrap iron.<sup>1</sup>

### Price Movements in Great Britain.

(July 1939 = 100.)

	Oct. 1939	Jan. 1940	Apr. 1940	Oct. 1940
Wholesale prices (Board of Trade)				
Foodstuffs . . . . .	120	136	138	157
Basic materials . . . . .	114	132	161	155
Manufactured goods . . . . .	104	113	120	125
General index . . . . .	113	128	135	145
Cost of Living (Ministry of Labour) . . . . .	106	112	114	116
Wages (Prof. Bowley) . . . . .	100½	104½	109½	113½
Price of U.S. dollar: official, London . . . . .	116	116	116	116
: unofficial, New York . . . . .	117	118	133	116
Shipping freight rates (Lloyd's List) . . . . .	199	335	503	.

The first three lines of this table show clearly the discrepancy which developed between foodstuffs and raw materials, consisting largely of imported goods, and manufactured articles, the price of

<sup>1</sup> *The Economist*, February 17th, 1940, page 288.

which was largely determined by the cost of domestic labour and equipment. The rise in import prices inevitably affected the cost of living to some extent.<sup>1</sup> As a result, there were widespread demands for wage increases. Some increases resulted automatically from sliding-scale arrangements. In comparison with the rise in import costs, the rise in wages between July 1939 and April 1940—amounting, on the average, to scarcely 10%—can hardly be considered immoderate. It was less than the rise in the cost of living; and this latter comparison, crude though it is, suggests that the working class standard of living did not escape the effects of the worsened conditions of foreign trade. But the wide prevalence of wage increases gave rise to serious fears of an inflationary spiral of costs and prices. The Government, therefore, made various efforts to arrest the movement. In October 1939 a Prices of Goods Act was passed, which prohibited the raising of prices for specified goods by more than what corresponded to the increase in certain expenses. Maximum prices for important raw materials were fixed under the controls instituted by the Ministry of Supply, regulating the distribution of the materials to the various industrial consumers. Maximum prices were also fixed by the Ministries of Food and Agriculture for various products which they controlled. But in practice the official maximum had to be moved up in many cases. More significant was a new policy announced at the beginning of 1940, when it was disclosed that the Treasury had been subsidizing the prices of foodstuffs at a current cost of about £50 million a year, with the deliberate object of restraining the rise in the cost of living.

In fact, the rise in prices slowed down appreciably at the beginning of 1940. It did not stop, of course; and at some periods later in the year it became again accelerated. It may well be that the sudden advance in the autumn of 1939, due in the main to the exchange depreciation and to transport and insurance charges, gave the initial stimulus to the other and more serious influences, arising from the exigencies of war-time finance, making for a rise in prices. But in itself the price disturbance of the transition period in the United Kingdom was comparatively innocuous.

In France, the chief economic problems of the transition period arose out of the mobilisation of several million men for the army. The exact number involved was not made public, but it undoubtedly represented a high proportion of the French working population. The effect of this upon the productive system of the country was naturally very serious. In order to offset the loss of industrial man

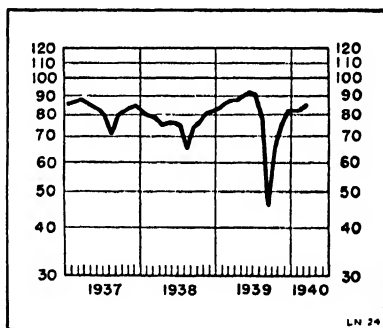
<sup>1</sup> The introduction of the Government's compulsory war risk insurance scheme for commodity stocks should also be mentioned as one of the factors which tended to raise both retail and wholesale prices.



power, the standard working week in industry in general was raised from 40 to 45 hours in October 1939. The actual working week, especially in munitions industries, was raised up to 72 hours. Increased use was made of female labour and of youths under eighteen years of age.<sup>1</sup> After the first few months, certain categories of mobilized workers were released for specialist work. The conditions of labour were made exceedingly stringent; workers were barred from changing their employment without permission, and could be assigned to different factories by the authorities.

As was mentioned earlier, French industrial output, after having declined by some 50% in September, recovered to 83% of the pre-war level in November 1939. Further evidence of a rise in production resulting from the measures described was given in various official statements, according to which, for example, electric power plants and the metallurgical industry had reached the pre-war level of activity by December 1939, while industries producing heavy chemicals and aluminum were operating at 10% to 15% above the pre-war level. There is no doubt, therefore, that the initial difficulties connected with the mobilisation were surmounted with a measure of success. Nevertheless, the index of French industrial production, as plotted in Diagram 2, remained even in March 1940 below the pre-war level; and it should be noted that the pre-war level itself was considerably below the level of 1929.

*Diagram 2.*  
INDUSTRIAL PRODUCTION IN FRANCE.  
(1929 = 100.)



In sharp contrast to the extensive controls adopted in the field of labour and industrial production was the virtual absence of restrictions on civilian consumption. France occupied in this respect a singular position not only among the belligerent but also among many neutral states of Europe. True, the consumption of gasoline and of butchers' meat was subjected to certain restrictive regulations before the close of 1939; and in the following March measures were taken

<sup>1</sup> The measures adopted for this purpose culminated in a Decree of February 1940, which made it compulsory in specified industries to engage a certain percentage of women workers so as to free men for work in munitions industries. Another decree issued in the same month ordered the industrial recruitment of young men over 16 years of age. (Cf. *International Labour Review*, June 1940, pages 584-90.)

to regulate sales by bakers and butchers, to limit expenditure in restaurants and to enforce economy in the use of gasoline and alcohol. But it was not until the spring of 1940 that arrangements were made for a general census in order to prepare for the issue of ration cards. In regard to food at least, this liberal policy was considered not unnatural in view of France's high degree of self-sufficiency in food-stuffs. Though sharp increases occurred in the prices of imported goods (mainly raw materials), the cost of living rose relatively little (by only 1% in the first three months, according to official information), partly because important items of popular consumption were of domestic origin, but partly also because Government supervision of wholesale and retail prices was introduced on a wide scale.

The comparative freedom of consumption, however, was accompanied by severe restrictions on consumers' incomes in terms of money. As part, indeed, of the general price control, it was decreed that in "civilian" industries wage-rates were not to be raised from their pre-war level without approval of the Minister of Labour, while in the armanent industries wages were fixed by the Minister of Labour and the Minister of Munitions. Taxes on business turnover, income and profits were sharply increased and/or extended in scope. An outstanding feature of the fiscal measures adopted was that they affected wage-incomes and in a remarkably drastic manner. In the first place, workers between the ages of 18 and 49 who, for reasons of health or special qualifications, were exempted from military service, had to pay a special levy equal to 15% of their wages. A second levy was imposed on these and all other workers, equal to one-third of their earnings for overtime and their whole earnings in respect of the five extra hours per week which they had to work before overtime was reckoned.<sup>1</sup> The proceeds of these special contributions were credited to a fund called the National Solidarity Fund, out of which allowances were paid to necessitous families of mobilised men.

The case of Germany presents less interest as regards the shift from peace to war economy, since the shift had been so largely accomplished already before the war;<sup>2</sup> and the type of State-controlled economy which had evolved in this process has often been described.<sup>3</sup> Yet even in Germany the opening of hostilities implied vast and far-reaching changes. Thus it has been semi-officially stated that 20,000 million marks were spent on war preparations in the last twelve months of

<sup>1</sup> As stated before, the standard working week was raised from 40 to 45 hours in October 1939.

<sup>2</sup> This fact was emphasized with satisfaction in German periodicals and economic journals in the opening weeks of the war.

<sup>3</sup> Cf. League of Nations: *World Economic Survey*, 1937/38, pages 33-37, and *World Economic Survey*, 1938/39, pages 31-37.

peace,<sup>1</sup> and that shortly after the outbreak of war military expenditure was at a rate of between 36,000 and 48,000 million marks a year—an expenditure which represented between 38% and 51% of Germany's national income of 95,000 million marks, as estimated for 1939.

As one means of meeting this expenditure, taxation was severely increased in various ways, so as to make it yield approximately 24,000 million marks in the fiscal year ending March 31st, 1940, as compared with 18,200 million in the preceding fiscal year. But this was clearly not enough. Another means was sought through a modification of the price structure. Not only were the existing measures for preventing increases in prices and wages continued, but an attempt was even made immediately after the outbreak of war to bring about a general deflation of wages and a partial deflation of prices. The intention seems to have been to cut down the prices of goods bought by the State, while leaving the prices of ordinary consumers' goods unchanged. Under a Decree of September 4th, 1939, wage rates were generally reduced to the level of 1936; extra pay for night work, Sunday work and overtime work was abolished; holidays were suspended, and the payment of double wages as a substitute for holidays was prohibited. The sums saved in wage costs by manufacturers were to be paid into the State Treasury, except in the case of goods the prices of which were reduced to correspond with the lowered costs.

In fact, this deflation encountered such resistance that the attempt was soon abandoned. In December 1939 extra pay for night work, holiday work and overtime was restored; and workers were again to be entitled to holidays. But some reduction in wages remained; for in future overtime rates were to be paid only for hours in excess of 10 a day, as against the pre-war 8 hours a day. The extra pay saved had to be paid into the tax office.

Thus, in carrying out the necessary curtailment of consumption to "make room" for the requirements of the State, the main emphasis came to be placed on direct and quantitative restrictions on consumers' purchases rather than on curtailment by way of money incomes. By a Decree of August 24th, 1939, and by additional ordinances issued in the following weeks, a rigorous scheme of rationing was imposed on practically all foodstuffs and on a number of other articles of popular consumption such as soap. Clothing, footwear, bicycles and other such articles could be obtained only through a system of "buying permits" issued on certain stringent conditions in each individual case. For clothing this system was generally replaced by one of

<sup>1</sup> The Chancellor of the Reich announced on September 1st, 1939, that some 90,000 million marks had been spent on national defence between 1933 and 1939, an average expenditure of 15,000 million marks a year.

ration cards in November 1939. As for the inessential durable goods not subject to restrictions, many of them gradually disappeared from the market as their production was stopped, and as existing stocks were sold out.

This state of things had important consequences on the financial side. People's money receipts tended to remain idle in part, because there was nothing on which to spend them. There was thus an indirect but nevertheless effective compulsion to save, which naturally simplified the Government's problem of borrowing. Even when the Government borrowed from the banking system, which it did to a large extent, the resulting creation of new money was, in part at least, "sterilised" through the inability of the recipients of this money to pass it on in exchange for goods and services. There is no doubt that this accumulation of unusable funds increased in various ways the pressure on commodity markets; prosecutions for infringement of the price control were frequent; but, given the drastic powers of the police and other authorities, this general system as it developed in the first few months of the war seems to have proved adequate. At any rate, it underwent no substantial changes during 1940 and the first half of 1941.

In Germany's external relations it was, of course, the allied blockade which made the greatest change. State control of foreign trade and exchanges, however, was already so far-reaching in Germany that practically no changes of organisation were necessary when the war began; and the production of domestic substitutes and the development of trade with South-Eastern Europe were policies of several years' standing, which required only to be continued with greater intensity. But there was one problem which seems to have proved unexpectedly difficult, and that was the problem of transport. If one remembers, for example, that Roumanian oil reached the German market normally by the sea route to Hamburg, and that Germany's coal exports to Italy were shipped by sea from the lower Rhine,<sup>1</sup> the strain imposed by the blockade on Germany's internal transport system is easily realised.

In many branches of German industry not directly connected with rearmament there were, before the war broke out, signs of a consumption of capital, in the sense of a failure to maintain equipment physically intact. This wearing out of the capital stock was particularly evident in the case of the German railways. Total railway traffic in 1938 was 16% larger than in 1929; but the number both of locomotives and freight cars was 4% lower; and this com-

<sup>1</sup> This traffic was discontinued in March 1940. Other German exports by routes accessible to the blockade were stopped in December 1939. Germany's import trade by these routes was stopped in September 1939.

parison of quantity takes no account of the deterioration in the quality of the equipment. In the years preceding the outbreak of the war, capital expenditure on the transport system was directed chiefly to the construction of motor-roads. When the war came, these motor-roads proved of restricted value owing to the shortage and stringent rationing of gasoline.

In an effort to make up the deficiencies in the railroad system, a four-year programme was initiated in March 1939 for the construction of locomotives, coaches and freight cars. But this was probably too late to yield any results at the beginning of the war. The blockade, as mentioned before, threw a heavy burden on the German railways; and the rationing of petrol meant, in addition, a vast shift of internal traffic from the roads to the railways. To meet this severe strain, attempts were made to obtain rolling stock from other countries;<sup>1</sup> and strenuous efforts were undertaken to raise the efficiency of railroad operations in all possible ways. Further information on these measures is given in Chapter IX, devoted specially to questions of transport.

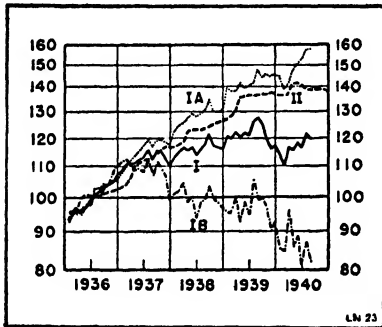
Japan had been at war for more than two years when the European conflict began. There was no longer any "transition problem" for her. Yet, in the world economic situation of 1939, her case presents some interest as an illustration of the economic exhaustion which tends to ensue from a protracted war effort with limited material resources. In the earlier part of 1939, "it was recorded, for instance, that a considerable increase in the number of fires in factories in the Tokyo area was largely due to the excessive fatigue of the workers. Moreover, the statistics of sickness, accidents, and absence from work began to rise. Accordingly, on March 31st, 1939, the Government issued an order for the protection of workers employed in branches of industrial activity where work necessitated by the requirements of national defence was carried on."<sup>2</sup> This order, fixing a maximum working day of 12 hours, came into effect on May 1st. In the spring of 1938, a "National General Mobilisation Law" had been enacted, with the object of increasing the supply and efficiency of labour and of raising the productivity of industrial equipment. In April 1940, a Japanese source stated that it was "doubtful" whether the result had been "satisfactory." "Labour efficiency," it said, "has lately become strikingly low."<sup>3</sup> The material equipment was likewise deteriorating. Plant and machinery were wearing out and could not be adequately replaced; and this consumption of capital was taking place not only in the "inessential" consumers' trades, but also in the armament

<sup>1</sup> Sweden, for example, lent a certain number of railway trucks to Germany to secure the transport of coal from the German mines to the Baltic Sea ports for shipment to Sweden.

<sup>2</sup> *International Labour Review*, October-November, 1940, page 270.

<sup>3</sup> "Trade and Industry, 1939/40," Supplement to *Oriental Economist*, April, 1940.

industries. Two special circumstances supervened in the winter of 1939/40 to aggravate further the difficulties of renewal and maintenance. Important shipments of German machine tools and other industrial equipment destined for Japan were intercepted by the British blockade. The United States allowed its commercial treaty with Japan to expire in January 1940 and imposed an informal but effective embargo on exports of machine tools and scrap iron to Japan.



*Diagram 3.*

JAPAN: INDUSTRIAL PRODUCTION AND  
EMPLOYMENT, 1936-1940.

(1936 = 100.)

I: Industrial production, total.

IA: Production of investment  
goods.

IB: Production of consumers'  
goods.

II: Factory employment.

From the above diagram it is quite clear that Japan's industrial output suffered a serious setback in 1939. Some of the decline that occurred in the second half of the year was due to a drought, which interfered with the electric power supply. Some of it, affecting particularly the index for consumers' goods, was due to the fall in exports of cotton manufactures; a 30% fall in the production of "food and drinks" from March 1939 to March 1940 also contributed to the decline in that index. A comparison between the index of total production and the index of factory employment may be of interest as an indication of changes in labour efficiency. The fact that the number employed in factories steadily increased while output increased more slowly and later declined would seem to point to a decline in average output per worker.<sup>1</sup> The decline in productivity may have been due to two factors. Firstly, the additional labour force, drawn mostly from the female and the rural population may have been less efficient; and secondly, the per capita output of the workers already in employment may have declined. From the diagram it is clear that the second factor must have been in operation to some extent after the spring of 1939.

<sup>1</sup> The index for "investment goods" represents of course mainly armament industries; but neither it nor the index of total production covers the munitions industries in the strict sense of the term. The index of factory employment probably does. The probable difference in the scope of the indices must be kept in mind in estimating the change in productivity; but this is unlikely substantially to affect the general conclusion.

## CHAPTER II

### WARTIME CONTROL OF PRODUCTION

In 1914 the world entered the war relying mainly on the free price system to achieve the necessary adjustments in production and consumption. As the war progressed, scarcities of labour and goods forced Governments to regulate prices, consumption and production so that, by the end of the war, the principal nations had developed far-reaching systems of direct state control of industry and trade.

At the outbreak of the present war, the idea of achieving a transfer from peace to war economy through the unaided workings of a free price system had been very generally abandoned in favour of direct mobilization of resources. Such a policy was facilitated by the fact that, during the inter-war period, Governments had acquired considerable experience in the art of state control and had created many administrative agencies which could be adapted for war purposes.

It would be premature in this survey to analyse in detail the systems of wartime control of production or to judge their importance. Institutions, policies and practices are in a state of flux, and the absence of full information renders it impossible to draw a complete or in any way final picture. The purpose of the present chapter, therefore, is to state the main problems that presented themselves and to indicate, by means of examples, how they are being solved.

Although the administrative machinery of control is of less interest from the economic point of view, it seems necessary to give a brief account of it in the first section. The more significant questions relating to the content as distinct from the instruments of policy are dealt with in the later sections of this chapter.

### ORGANIZATION OF CONTROL

At or before the outbreak of war, Governments in many countries were given wide legislative powers over production, trade and distribution and were authorized to conscript labour, plant and other resources. These blanket powers, however, were enforced by executive orders, and only gradually does any picture of systematic organization emerge. The following description is mainly concerned with the situation during the spring of 1941 in certain selected countries.

Germany differs from most other countries in that the organization of her war economy was ready before the outbreak of hostilities. After the advent of the National Socialist Party to power, the Ministry of Economic Affairs at first constituted the central organ of control over the national economy. With the introduction of the Second Four Year Plan in 1936, this body became concerned primarily with the execution of the policies laid down by the head of the Four Year Plan. At the outbreak of war, a General Council was formed to coordinate administration. Its permanent members include the heads of the Four Year Plan and of the Department for War Economy and Armament of the High Command, the departmental chiefs of the various Ministries, the Price Commissar and a representative of the Party. Its chairman is the Head of the Four Year Plan. Policy-making and planning are shared jointly by the "War Economy and Armament Department" and the "Four-Year-Plan Offices." The administration of these plans rests with the ordinary Ministries and the special commissars. District Economic Boards, the regional representatives of the Ministry of Economic Affairs, also play a major rôle in the administration of economic policy.

In the "Plan for the Preparation of the Organic Reconstruction of Germany's Economic System" promulgated in 1934, the regulation of industry was at first secured by making membership in trade associations compulsory; these associations were coordinated in a National Economic Chamber and centrally controlled through the Ministry of Economic Affairs.<sup>1</sup> Members of the Nazi Party were appointed to key positions in this centralized organization. The Second Four Year Plan contained the basis for a more direct control of industry and led to the appointment in 1938 of special commissars in the coal mining, building, machine, road transport and electric power industries with almost complete powers over production. Concurrently, semi-public vertical holding companies, or trusts, were widely developed. As a result, the original industrial associations have been largely reduced to the position of advisory bodies, whose chief function is to carry out cooperative projects and to provide channels through which the special commissars operate.

The labour market is similarly organized through the Labour Front. The regulation of wages, conditions of labour, etc. is assigned to the labour trustees appointed by the Minister of Labour for each district, who exercise exclusive control over conditions of work within the framework laid down by the central authority. Control is greatly facilitated by the labour exchanges and by the "labour books."

<sup>1</sup> The whole economy was organized into five Estates, of which one was the Estate of Industry and Trade.



The latter are passports necessary for industrial employment, containing a complete description of the workers' training and record. Duplicates are lodged with the labour exchanges, which thus possess a complete record of the whole labour force of the nation.

The Ministry of Food and Agriculture exercises control over agricultural production, prices and marketing mainly through the Reich Food Estate, which all producers, processors and distributors are obliged to join. Each farmer must possess a "farm management card," containing information regarding the output and efficiency of the farm and its occupier and serving a purpose similar to that of the "labour book."

In Italy an organization on similar lines existed before the war. The Ministry of Corporations is vested with the function of economic planning and control. Industry, labour and agriculture are compelled to organize on corporate lines, employers and workers being organized separately into confederations and collectively into corporations of local, provincial and national scope, coordinated finally into the National Council of Corporations. As in Germany, a central feature of governmental policy has been the appointment of members of the Fascist Party to strategic positions in the industrial, labour, and agricultural organizations. During the present war, the importance of the corporations would appear to have declined, the Ministry of Corporations tending to impose its policies more directly through the various associations of producers.

In Japan, the planning of economic activity is centered in the Cabinet through its Planning Bureau. The Ministry of Commerce and Industry exercises control over industrial production and distribution, operating through Governors who in turn work through guilds and associations of producers. These general controls have often proved insufficient, and in a number of cases—iron and steel, wood, power, etc.—a more complete regulation of all phases of production has been entrusted to Government-controlled corporations.

The General Mobilization Act of 1938 empowered the Government to conscript all economic resources; and during 1940, political parties, trade unions and employers' associations were dissolved, plans being announced for the organization of labour and industry according to the German pattern, as expressed in the Revised Mobilization Act of March 1941. A new Ministry of Wartime Economy was created to administer these policies, operating, however, mainly through the existing administrative machinery.

In August 1940, the Cabinet approved the creation of a new structure of the labour market. All employees were to be organized into cooperative bodies, and existing organizations of labour were to be absorbed by the Federation of Corporations.

The Department of Agriculture and Forestry controls agriculture according to plans laid down by an Agricultural and Forestry Planning Commission; production quotas are imposed on the farmers through a system of provincial and village organizations; this regulation of supplies is achieved through Government-controlled corporations such as the Japan Sulphate of Ammonia Distribution Company and the Japan Phosphate Distribution Company.

In Great Britain, the Emergency Powers Acts of August 24th, 1939 and May 22nd, 1940 empowered the Government to establish a complete system of war economy. In June 1940, a "Production Council" was formed, containing representatives of various ministries. In January 1941, this council was replaced by two executive organs—the Production and Import executives. The former was a committee of five under the chairmanship of the Minister of Labour and National Service. Both remained under the final authority of the Cabinet.

Industrial control is centered largely in the Ministry of Supply, which regulates prices, stocks and the distribution of materials and supplies (including the determination of priorities) through Commodity Controllers, a controller being appointed for each commodity brought under Government supervision. In collaboration with members of the trade, and with the Central Priority Department of the Ministry of Supply, each controller is directly responsible for carrying out the allocation and limitation of materials for which he is responsible. Until October 1940, this system was used also to control building, but at this date a special Ministry of Works and Building was created.

Control of the labour market and measures of social welfare are entrusted to the Ministry of Labour and National Service. The powers of the Home Office, under the Factory Acts, have been transferred to this Ministry. Through the National Labour Supply Board, containing representatives of industry and labour, and the system of public employment exchanges, it controls the labour market. A National Arbitration Tribunal hears labour disputes when private negotiations have failed.

Control of agriculture is shared by the Ministry of Food and the Ministry of Agriculture. The former, through a network of regional and local offices, regulates prices, imports, stocks and the distribution (including rationing) of food. The latter is entrusted with control of production; it supervises, through its local officials and local producers' committees, the recruitment of labour, the distribution of feeding stuffs, fertilizers, machinery, etc., and the direction of production. Special boards, additional to those existing before the war,

have been created to supervise the production and marketing of important foods.

The principles of control in the British Dominions are, broadly speaking, of the British pattern, though control is generally less far-reaching.<sup>1</sup>

In Canada, industrial control falls largely under the Department of Munitions and Supply established in April 1940.<sup>2</sup> Working through the Wartime Industries Control Board and by means of special controllers it supervises production and distribution of important raw materials and products.<sup>3</sup> Measures have also been taken to coordinate the wartime economy with that of the United States. An agreement was reached between the two countries in April 1941, and on May 15th a Material Coordination Committee was appointed, whose Canadian members are chosen from the Wartime Industries Control Board.

A Labour Supply Council, containing representatives of industry and labour, considers matters pertaining to the labour supply. The major policy-forming body, however, is an Inter-departmental Committee on Labour Coordination, containing representatives of the main Ministries and the Labour Supply Council.

Under the Ministry of Agriculture, the Agricultural Supplies Board serves as coordinating agency, while special boards and committees such as the Fertilizer Supply Committee and the Bacon Board are responsible for the administration of specific controls.

In the United States, a declaration of national emergency proclaimed in September 1939 and further extended in May 1941 vested the Federal Government with wide powers over the whole of economic life. So far, these powers have been applied sparingly, emphasis being placed on the voluntary collaboration of industry and labour.

The coordination of the defence effort is vested in the Office for Emergency Management, its prime function being to serve as a liaison between the President and the various defence agencies. Control of industry is largely shared by the Office of Production Management and the Office of Price Administration and Civilian Supply.

<sup>1</sup> Measures have been taken to coordinate the economic activity of the various members of the British Commonwealth of Nations. Thus, in the latter part of 1940 a conference of the Eastern Empire countries was called to draft measures for the coordination of the production of each country, the objective being to provide for an increased output and interchange of war supplies, particularly manufactured and finished goods, among the eastern countries. A permanent Standing Committee and Secretariat were formed to initiate further measures.

<sup>2</sup> Control of coal and some other commodities, however, is vested in the Wartime Prices and Trade Board, under the Ministry of Labour.

<sup>3</sup> The powers of the controllers vary. They are generally authorized to buy, allocate or requisition materials, and plants producing them, to fix prices or to take other measures considered necessary in the national interest.

The Office of Production Management contains two major divisions, production and labour. There are three subdivisions for purchases, priorities and research and statistics. In June 1941, 30 committees, one for each important industry, were appointed within the Office of Production Management to consider production, purchases and priority questions, thus greatly simplifying procedure. The original Production, Purchases and Priority divisions, however, retain final authority in their respective fields in the event of dispute. The Office of Price Administration and Civilian Supply is concerned with price control, the prevention of hoarding of strategic materials, and the allocation of scarce materials to civilian industries after defence requirements have been met.

Labour control lies with the labour division of the Office of Production Management. A Labor Policy Advisory Committee, containing representatives of labour, advises the directors of the Office of Production Management on labour policy, and a Labor Supply Division is concerned with the recruiting, training, and placing of labour for defence purposes. In July 1941, defence advisory committees, on a par with the industry committees, were created to advise the Office of Production Management and other defence agencies on problems of production, purchases and priorities. In addition to the special agencies created for the execution of the defence programme, some of the regular departments have received extended authority. The Department of Agriculture is authorized to exchange surplus commodities against strategic materials, the Reconstruction Finance Corporation to finance expansion of defence plant and purchase of essential commodities, etc.

In France, the General Mobilization Act of July 1938 empowered the Government in the event of war to requisition all human and material resources. But there was no general body of control and coordination until March 1940, when an Economic Council of Ministers was formed. Prior to the creation of this body, the organization of the war economy was based largely on voluntary collaboration.

Regulation of industrial production was centered in the Ministry of Commerce, working through a number of regional committees. In addition, control over each major resource or group of commodities was assigned to a Cabinet Minister. Subject to this limitation, however, and certain military priorities, production, allotment of raw materials, equipment, etc. were controlled by groups of producers under Government supervision.

The Minister of Labour was charged with the mobilization of labour. At his disposal were departmental committees consisting of representatives of employers and workers under the chairmanship of a Government nominee. But the training of labour was entrusted to

the Minister of Education with provision for close cooperation with liaison committees composed of representatives of the other Ministries.

Agricultural control was in the hands of the Ministry of Agriculture. A general War Provisioning Service was charged with the supply and distribution of food, while an Office for Wartime Management of Agricultural Production was in charge of the direction of production. An Office for the Mechanization of Agriculture supervised the use of agricultural machinery, and an advisory committee consulted with the Minister on the use of fertilizers.

After the armistice the economic organization was overhauled and attempts made to reorganize it on a totalitarian pattern. No clear picture of the significance of these changes has as yet emerged.<sup>1</sup>

### INDUSTRIAL MOBILIZATION

In considering Government control over industry, it is convenient to distinguish between efforts to keep down prices, to divert resources from civilian to war purposes, and to expand resources. It is further convenient to treat separately the various factors of production. The control of prices and indirect means of diverting production by influencing demand are dealt with in Chapter IV. Here we are concerned with the more direct measures designed to affect the supply of war material or civilian supplies deemed essential for the war effort. But it is not possible to give more than a cursory description of some of the more important measures adopted or principles underlying those measures.

<sup>1</sup> Economic policy is under the general direction of the Ministry of National Economy and Finances, and a Superior National Council of Economy, composed of technical experts serving in an advisory capacity. A Ministry of Industrial Production coordinates and centralizes all industrial control.

Employers' associations relating to more than one industry have been dissolved and National Committees, under direct Government supervision, appointed to control each industry. Under these are Departmental Committees which regulate the activities of local organizations engaged in each industry.

Workers' associations covering more than one industry have also been dissolved and the regulation of wages, the distribution of labour, and conditions of work centralized in the Minister of Labour. The Government has recently appointed representatives of employers and workers to meet to form a "Labour Charter" to form the basis of French labour policy. Industry and the professions are to be organized on a "social basis" so as to put an end to class struggle.

Agriculture is to be organized on a corporate basis under the Ministry of Agriculture. The basis of organization will be the local farm syndicates. Membership is not expected to be compulsory as the benefits of membership and the difficulties of remaining independent will, it is expected, induce farmers to join. In addition, the Ministry of Supply has been given extended powers over agriculture. During the war the Ministry acted through a system of voluntary negotiated contracts, but can now compel farmers to cultivate certain crops and can requisition uncultivated land. Special collectors have been appointed to requisition and redistribute available stocks.

The first step normally taken by Governments in the early stages of the transition from peace to war economy is to secure priority for contracts placed by them and then gradually to build up a general system of priorities for raw materials, machinery, labour, etc. Out of this system develop the specific controls of the various factors of production, certain of which are briefly considered below, and out of these specific controls the more far-reaching measures to rationalize production and expand productive capacity. But there is no unique or uniform pattern of development. In one country or in one industry measures to expand capacity may be adopted long before any general or specific control of industry has been imposed. Indeed, in all countries, the need for expanding one type of equipment or another is likely to make itself felt at a very early stage.

Under the Second Four Year Plan, the German Government took measures to rationalize and to contract the distributive and retail trade with a view to releasing man power, and simultaneously to reduce the number of small industrial establishments. The concentration of industry was promoted, and the Ministry of Economic Affairs was authorized by a decree of September 5th, 1939, to require firms to combine for the purpose of rationalizing production, of erecting new plants, closing down old ones, etc. Accordingly, numerous factories have been designed as "War Plants" and placed under military control, while others have been closed down.<sup>1</sup>

In Great Britain at the beginning of the war, the transfer of resources was achieved through voluntary and indirect means, and through the control of raw-material imports. Later, the labour controls and, above all, the "Limitation of Supplies Orders" introduced in April 1940 were the chief instruments in restricting activity in the consumption goods industries. In March 1941 a policy of industrial concentration was announced. In order to free workers needed for the defence effort and to make available factory and storage space, production is to be concentrated in "nucleus firms" in each branch of the consumption goods industries, which would thus be able to work full or nearly full time. It is expected that this scheme will release between 500,000 and 750,000 workers for war purposes.<sup>2</sup>

<sup>1</sup> A levy has been placed upon plants still in operation to serve for the maintenance of closed plants and their reopening after the war.

<sup>2</sup> The plan of concentration provides for a collaboration between the Government and each industry affected. The Board of Trade will indicate the degree of concentration desired and may suggest the procedure for attaining it. The control details are to be determined through conferences between the Industrial and Export Councils, the Ministry of Labour, the Limitation of Supplies Department of the Board

Similar measures have been taken in Japan in certain industries, such as cotton manufacture and coal mining.

### *Control of Plant and Equipment.*

A number of countries, including Canada and the United Kingdom, have prohibited the introduction of new models of automobiles and other durable consumers' goods so as to decrease the demand for machine tools and plants. A similar purpose is served by the standardization of consumers' goods. In addition, prohibition of the manufacture or sale of a number of goods most directly competing for scarce resources and raw materials has been imposed.

In Germany, the concentration of industry has tended to bring about a more rational and intensive use of the machinery and factory space. Even before the war, sale and purchase of machines were placed on a priority basis under the supervision of a special controller. In the United Kingdom regular censuses were taken of machines and machine tools, and clearing centres have been created to ensure that no essential tools remain idle. In January 1940 the voluntary priority system was superseded by a licensing system under the Ministry of Supply, and no machines or machine tools can be sold, bought or transported without previous permission. Indeed, one of the primary functions of the Production Council was to coordinate the work of the clearing centres and the machine tool censuses. In the United States the export of machine tools was made subject to license in July 1940, and after a period of voluntary priorities the sale of machine tools was placed under the control of the division of priorities of the Office of Production Management. Sale was prohibited to all but industries producing either for defence or for Great Britain. Surveys of existing plants and machinery have been undertaken and a "ceiling" placed on prices of used machine tools.

of Trade, the Ministry of Supply, and representatives of the trade associations, employers and labour unions.

The actual operation of the different industrial schemes is left largely to industry itself, but the nucleus in each industry must fulfill certain general conditions:

(1) It must provide for the complete closing down of non-protected firms.

(2) It must supply financial compensation to firms closed down.

(3) It must undertake the upkeep of closed plants, unless requisitioned by the Government.

(4) It must provide for the production of goods for export previously undertaken by closed firms.

(5) The arrangements dealing with the workers affected must be satisfactory.

As regards the last point, the firms must satisfy the Board of Trade and the Ministry of Labour that the concentration, if possible, will be in an area not competing for labour with the war industries and that the labour released will be applicable for new employment, and if not, taken over by the reserved plant.

The cotton industry was the first to be called for consultation. After consultation, a list was presented to the Board of Trade which approved 111 spinning firms as a nucleus; 61 were to close, while 229 were given further consideration.

While industrial concentration is both inevitably stimulated by the war and in certain countries has, as already noted, been directly promoted by Governments, considerable attention has been devoted, particularly in Great Britain and the United States, to means by which the smaller firm, while preserving its identity, may contribute most efficiently to the general war effort. Great Britain has applied two plans. The first is the "parent loan" scheme under which one firm acts for a group of firms and negotiates contracts with the Government. The second is the "embodiment plan" which was originally used by the Air Ministry but is now being extended to other fields. Under this plan the Government buys parts and accessories directly from one set of firms and supplies them to others at a later stage of production for assembly. In the United States a special Office for Small Business has been created within the Office of Production Management for the purpose of encouraging subcontracting to small enterprises; and in Germany the Ministry of Economics before the war instituted a system of local and national "Order Equalization Boards" operating through special "Order Houses" to facilitate subcontracting to small firms.

### *Building Control.*

In Germany, building was placed under State control by the Second Four Year Plan. The building control had previously been indirect, resulting from the priorities of raw material, labour, etc. A special Building Control Office was set up licensing new construction; repairs and civil building activities were severely restricted; in December 1939 an order prohibited the initiation of any construction which was not deemed essential by the Building Controller.

In Great Britain curtailment of private and municipal building originally resulted from shortage of timber and building steel, even though at the outbreak of war subsidies for slum clearance and rehabilitation schemes were stopped. Further curtailment resulted from the raw material controls. In October 1940 a "Works and Buildings Priority Committee" was formed to license and control all civil buildings. Since then regulation has constantly grown, and the Ministry of Works and Buildings has been given power to coordinate and control all building activity for the duration of the war. The situation in the United States, on the other hand, has not so far involved a curtailment of civil construction.

Simultaneously with the restriction of ordinary building activity, the direct control of essential construction has tended to become centralized. The expansion of plant to meet maximum requirements particularly in the heavy industries, much of which is not likely to yield a profit in peace conditions, presents obvious financial problems.



In the United States a number of different methods have been adopted to facilitate the expansion of the armament industry. In some cases the Government itself provides the plants to be operated by private management, particularly when the plant has no peace-time value; in others, plant, etc., financed and run by the Defense Plant Corporation, a subsidiary to the Government's Reconstruction Finance Corporation, is leased to private manufacturers; in others, private construction is encouraged under the "Emergency Plant Facilities Contract" by which the Government undertakes to reimburse the contractor in monthly installments over a period of five years. Finally, the cost of additions to existing plants for defence purposes can be amortized out of earnings over a five year period.

In Great Britain, similarly, various measures have been adopted to expand essential production facilities, and in June 1941 plans for a large scale construction programme were announced to cover air-fields, war factories, defence works and emergency hospitals at an estimated yearly cost of £360 millions.

In Germany, under the Second Four Year Plan, private firms were ordered to erect factories for specified purposes, financed directly through the state or through semi-voluntary or compulsory contributions from industry itself. Concurrently, indirect methods encouraging expansion in desired directions, such as cheap credit, tax exemptions, etc., were adopted. Later, a special Government agency, the "Todt Organization," was formed to repair transport and other essential facilities damaged by the war.

### *Control of Raw Materials.*

In no field has the war wrought greater disturbance than in that of raw materials. Most countries have suffered from the disruption of international trade and the need for raw materials for armament purposes has enormously expanded. In no field, therefore, is state intervention more general or more far-reaching.

Germany, in building up her war machine, introduced a virtual monopoly of foreign trade. Foreign currency was allocated to importers according to priorities, preference being given to importers of "strategic" materials, and secondly to export industries, the maintenance of which was essential for the acquisition of fresh supplies of foreign exchange. To prevent the bidding up of domestic prices, controls for the rationing of raw materials had to be instituted to supplement the trade controls. At the outset such controls were exercised mostly through the several National Groups into which, as described above, industry was organized, and the central control was limited to imported raw materials. The Second Four Year Plan centralized the control. At the outbreak of war the Government was in

a position to determine over the whole range of business what and how much should be produced; each purchase of raw materials depended on the approval of one or more control organs.

The changes in the system introduced at the outbreak of war were chiefly in administration and in the stringency of rationing. The control of available supplies was accompanied by measures to increase domestic production of raw materials, and in place of certain quasi-automatic methods of allocation, prescribing some percentage of the quantity used during a "reference period," the allocation of raw materials was made dependent upon each particular order for the finished product.

Germany's most serious raw material deficiencies were in iron ore, tin and copper, oils and fats, textile fibres and leather. To expand low grade or substitute production was one of the chief tasks of the second Four Year Plan, and the Government sponsored vast new investments in these industries. The "Hermann Goering Werke" for the extraction of iron from low grade domestic ores is but one example; other companies were formed or expanded for the production of oil, rubber, rayon, staple fibre, etc. This direct Government intervention in production—as opposed to the initial control of distribution through a regulation of demand—has given birth to a supplementary, and partly competing form of control. The growth of vast public or semi-public holding companies, along vertical lines, including the ownership and management of the sources of raw materials in addition to manufacturing plant, short-circuits the rigid system of bureaucratic control imposed upon private industry.

In addition to the stimulation of production, measures have been adopted everywhere to eliminate waste and to salvage scrap materials. Under the Four Year Plan a "Fight Against Waste" campaign introduced a compulsory collection of iron and metal scrap, rags, rubber, etc. The programme extended to every field where the promise of gain exceeded the expected cost of collection.

Before the war, and more particularly during 1938 and early 1939, Germany piled up stocks of essential materials such as natural rubber, oil and certain metals. As her military dominion was extended to one country after another, fresh supplies became available.

The methods used in incorporating the occupied areas into the German system of war economy exhibit two phases of policy. Immediately after the military occupation of a territory, the policy aimed at the rapid absorption by the Reich of available stocks of raw materials and food, munitions and war materials, new and used rubber tires, as well as of consumption goods such as clothing, footwear, and even furniture in houses from which the occupants were absent. The methods employed in carrying out this transfer varied

from ostensible purchase to outright confiscation and requisitioning. Producers and dealers were obliged to declare stocks of all raw materials and machinery, semi-manufactured articles, etc. Goods belonging to the Government or Government-controlled industries were regarded as war booty pure and simple and sent to Germany. The rest were considered an integral part of the German war resources and disposed of in various ways. Frequently they were acquired through formal purchases so arranged that the occupied areas themselves supplied the necessary purchasing power. Frequently also they were acquired without purchase.

The second phase of policy aims at an integration of the productive resources of the occupied areas into the German war economy. In the areas which have been formally incorporated into the Reich (Austria, the Sudetenland, Western Poland, Danzig, Alsace and Lorraine, Luxemburg, Eupen and Malmédy) the German system of control appears to have been applied with certain modifications, but little is to be added to what has been said above about Germany proper. In the Protectorate of Bohemia and Moravia, and to a less degree in Holland, Belgium and occupied France, direct German controls have been instituted, while maintaining in varying degree the semblance of a separate national economy.

While the use of scarce materials for domestic civil purposes has been severely curtailed or stopped, Germany has placed large orders for both consumption goods and armaments in the occupied areas. In meeting these orders local stocks of raw materials, not previously transferred to Germany, are used in the first instance; when they are exhausted, and if domestic production is inadequate, Germany supplies the required material. At the same time steps have been taken in the occupied areas to increase the production of materials—coal, iron, etc.—of importance to the German economy, and to collect waste materials. The manner in which trade is conducted between Germany and the occupied areas is described in Chapter VIII.

France imposed export and import controls over raw materials early during the war. Preference was given to imports for military, export and civilian industry in the above order. Control over each resource or category of commodity was vested in one Minister; subject to military priorities, rationing of raw materials was handled by *groupements*—generally voluntary combinations of producers and merchants under official supervision. In view, however, of large domestic supplies of materials, a relatively favourable foreign trade position, and the limited extent of industrial expansion, practices remained more liberal than in other belligerent nations until after the invasion, when the situation was radically changed.

In the United Kingdom steps to accumulate reserve stocks of raw materials had been taken under the Essential Commodities Reserve Act of 1938, and certain purchases of foodstuffs, cotton, petroleum, aluminium, nickel and fertilizers had been effected. Although the First Emergency Powers (Defence) Act granted wide powers of control at the outbreak of war, they were applied gradually and a more centralized system came into being only after the passage of the Second Emergency Powers (Defence) Act in May 1940.

The first controls related to imported materials. A system of licensing was instituted under the Ministry of Supply under which priorities were established. Somewhat later in 1939 the system was managed through controllers who dealt with both the trade in various classes of goods, and the allocation of priorities to industry. By the spring of 1940 the most important commodities had been brought under control. From then on, the powers of the Ministry of Supply were strengthened, the competence of the Boards of Control extended, and further materials regulated until practically all commodities became subject to control. A general priorities scheme was drawn up, the order of priority being vital war industries, export industries and industries catering for domestic consumption.<sup>1</sup> Measures were taken to collect waste material, especially scrap iron and non-ferrous metals. In connection with the plan for concentration of industry discussed above, the system has become further centralized, and the administration of controls rendered more stringent.

Measures to stimulate domestic raw material production have been largely indirect; a system of subsidized production prevails for certain materials, but control was largely vested in various trades associations, and only recently have more direct means of control been used to increase the output of vital commodities, such as coal.

The United Kingdom has concluded a number of important agreements with certain primary producing countries under which she has effected large-scale purchases of essential raw materials from them, such as wool from Australia, New Zealand and South Africa, copper from Rhodesia and the Belgian Congo, jute from India, etc. The British purchase schemes, covering foodstuffs as well as raw materials, are referred to in Chapters VI and VIII.

In the British Dominions, and more particularly in Canada and Australia, the war effort has necessitated controls of raw materials, though less complete and drastic than in the mother country. Canada, while having a highly developed industry, is still an exporter of raw

<sup>1</sup> In the spring of 1941, steps appear to have been taken to replace the priority system by a system of allocation, under which materials were to be apportioned in accordance with each contract or order for the finished product. (*Cf. The Times*, May 21st, 1941.)

materials and foodstuffs. Her problem, therefore, has a dual aspect : to supply the necessary export of raw materials to the United Kingdom and at the same time meet the needs of her own expanding war industry. The latter task is complicated by her dependence on other countries for certain raw materials.

After enacting control of foreign exchange and foreign trade, therefore, a domestic control over the use of raw materials was introduced, centralized under the Department of Munitions and Supply through the Wartime Industries Control Board. Special controllers supervise the distribution and use of important raw materials.

In the United States measures during the first year of war did not involve any direct control of raw materials, but aimed at assuring supplies. By the Act to "Expedite the Strengthening of the National Defense" of July 2nd, 1940, export and import of essential materials were made subject to a licensing procedure, and the list of such materials has been gradually extended. But before this, steps had been taken to create certain reserve stocks. The procurement division of the Treasury Department was authorized in the summer of 1939 to purchase and store strategic materials, and somewhat later the Secretary of Agriculture was authorized to exchange surplus commodities for strategic materials. Under an Act of June 25th, 1940, the Reconstruction Finance Corporation was empowered to create special commodity reserve companies for the purpose of acquiring and stocking strategic materials.<sup>1</sup> Finally, steps have been taken to encourage increased domestic production of strategic raw materials and to foster production of raw materials in Latin American countries. However, following the expansion and acceleration of the defence programme, scarcities of some materials developed, and on January 7th, 1941, the Office of Production Management was granted powers to control and ration raw materials, and at the same time a priorities division was created within this office.

During the spring of 1941 the system of voluntary or requested priorities was superseded by a system of obligatory priorities. Aluminium was the first material to be subjected to the compulsory system ; but a growing list of materials is being put on the same footing—copper, aluminium scrap, magnesium, nickel, steel, zinc, certain alloys, etc.

#### REGULATION OF LABOUR

The purpose of labour control is to increase the total labour supply—depleted through the mobilization of the armed forces—and to transfer workers from unessential to essential occupations. This task is not merely quantitative. Modern production requires skills

<sup>1</sup> Under this Act, Rubber and Metal Reserve Companies have been set up.

in different proportions, and the war industries generally demand a high proportion of skilled labour.<sup>1</sup> In consequence it is useful to consider control of labour under the following headings: (1) "stretching" of the total labour supply; (2) prevention of labour disputes; (3) distribution, "dilution" and transfer of labour; and (4) vocational training.

### *Stretching of the Total Labour Supply.*

The labour supply can be increased, for instance, by lengthening average hours worked, extending the use of female and juvenile workers, reemploying pensioned and over-age workers and employing war prisoners and foreign workers.

Most belligerent nations have set aside the regulations governing the length of the ordinary working week and overtime. At the outbreak of war Germany removed all restrictions on working hours of adult males and extended hours for all other categories; but on December 12th, 1939, average working hours were limited to eight and daily working hours to ten or twelve. Special permission had to be secured for hours exceeding twelve a day for adult males and ten for women and juvenile workers. Holidays, which had been abolished, were restored and night work for women, except in the munition industry, was again abolished. In Italy, the 40 hour week was suspended in November 1939 and replaced by a 57 hour week. The transfer of skilled workers to Germany has necessitated extension of hours up to 72 a week in some industries. Many holidays have been suspended. In Japan no legal limits of work for adult male workers existed at the outbreak of the Chinese war, and actual working hours were so greatly extended as to lead to decreased productivity; in March 1939 the Government limited working hours in the defence industries to 12 a day.<sup>2</sup> In France, the 40 hour week had been virtually abandoned in November 1938, and in the spring of 1939 maximum hours in the defence industries were raised to 60 a week. At the outbreak of war this limit was extended to apply to all industries, and in some cases hours were extended to a maximum of 72 a week.

<sup>1</sup> For this reason, military conscription has tended to become highly selective, exempting from military service persons in "reserved occupations" or essential war industries.

<sup>2</sup> In Great Britain the Minister of Labour and National Service in the summer of 1940 appealed for a 7 day week of 12 hours per day to meet the emergency. Numerous exemptions were granted to the Factory Acts limiting the employment of women and children. In addition, a number of holidays were suspended. Subsequently, in view of the danger of very long hours decreasing the efficiency if continued over a protracted period, the Minister of Labour and National Service suggested a working week of 55-6 hours as most conducive to maximum efficiency. Policy, however, remained flexible and factory inspectors visited each establishment requesting regulation of hours on the merits of each case.

In Canada, legal limits on hours of work have been extended in several of the Provinces, and in November 1940 the Minister of Labour announced that it would be necessary to increase average weekly hours from 44 to 48 or more. In the United States, employers in defence industries have been urged to adopt a 160 hour, 4 shift working week; and the Office of Production Management has recommended that workers in these industries voluntarily forego vacations in return for bonus compensation.

With the growing demand for labour the reserve of women, young persons and persons above the retirement age, not usually gainfully employed, has been widely drawn upon. In such countries as Germany where labour was scarce before the war, liberal use has been made of such measures.<sup>1</sup> In the United Kingdom, on the other hand, where a considerable reserve of unemployed labour was available, similar measures were introduced more gradually, the first definite plans for an appreciable increase of women workers in industry being made during the autumn of 1940.<sup>2</sup>

Germany has made extensive use of prisoners of war and other forced labour, and it has been estimated that foreign labour (including prisoners of war) amounted to about 10% of labour employed at the beginning of 1941.<sup>3</sup> In the United Kingdom during the early months of the war friendly aliens were invited to register at local employment offices. To meet linguistic and other difficulties, an International Labour Branch was set up in the Ministry of Labour and National Service in August 1940 to facilitate the employment of these aliens. In the United States, firms have voluntarily raised the maximum age for hiring workers in certain skilled trades.

### *Distribution and Transfer of Labour.*

In Germany, through the creation of the German Labour Front, the Labour Trustees and other measures introduced in 1933 and

<sup>1</sup> The number of women employed in German industry in the first part of 1941 was 800,000 greater than at the outbreak of war. The workers reaching retirement age are not permitted to retire, if in good health. Regulations have recently been issued permitting the employment of invalids, aged people, and pensioners not already at work, wherever there are special jobs they can perform.

<sup>2</sup> However, an important agreement for an extended admission of women into the engineering industry was concluded in the spring of 1940, and women's auxiliary organizations attached to each of the fighting forces perform non-combatant services, and the Women's Land Army renders assistance in agriculture.

<sup>3</sup> A considerable part of the civilian labour thus transferred to Germany is to a greater or less degree forced labour. Unemployed persons in Poland are forced to register and are directly conscripted at nominal wages; in Belgium and the Netherlands labour was deprived of unemployment benefits and so forced to accept employment in the Reich. In addition the labour supply in Germany has been increased by the transfer of persons of German blood from other countries. The total of transferred persons including children has been estimated at approximately 500,000.

1934, the State assumed a complete control over wages and conditions of labour. The workers were left free to change occupations, but as the unemployed labour reserve decreased, labour scarcities developed and employers started to bid up wages.<sup>1</sup> The State, through the system of employment exchanges and the "labour books" introduced in 1935, had a practical monopoly of the labour supply, and the control of this system became vested in the Chief of the Second Four Year Plan, who was in a position to ration the supply of the free labour. In order to transfer labour from one employment to another, additional powers were granted to conscript labour in 1938, and extended in February and March 1939.<sup>2</sup> Thus, a system of centralized and direct control of labour was in being before the war, and was gradually extended and reinforced as the war progressed.<sup>3</sup>

This system has been extended to occupied countries, where forced labour has been introduced and special measures taken to compel agricultural and skilled labourers to leave their homes and accept work in Germany. Systems of state compulsion similar to the German obtain in Italy.

The United Kingdom entered the war with a considerable reserve of unemployed labour, though there was a lack of certain categories of skilled labour. There was therefore no immediate need for labour rationing or any essential modification of peace-time practices. In spite of the passage in September 1939 of the Control of Employment Act which aimed at preventing excessive wage increases and labour turnover, the system of free collective bargaining and wage fixation was left intact. However, to obtain information about the number and location of each type of labour, the National Registration Act of September 5th, 1939, required all persons to register, giving age,

<sup>1</sup> This problem has recently arisen in Canada and the United States. On October 3rd, 1940, the Canadian Minister of Labour urged employers to refrain from enticing workers away from each other by bidding up wages. The practice continued, however, and on November 7th any employer found guilty of the practice was made liable to a \$500 fine. In December 1940, a general limit was placed on the wage increases. In the United States on March 18th, 1941, the Under Secretary of War warned employers that labour "piracy cannot be tolerated" and pleaded with them to discontinue such methods.

<sup>2</sup> Semi-conscription of workers in certain occupations, such as agriculture, has been in operation since 1934. These general powers of conscription of labour should not be confused with the German Labour Service. Every young German must join the labour corps between leaving school and his military service.

<sup>3</sup> Conscription has been extended to include women registered at Labour Exchanges between 15 and 70 years of age, and boys and girls upon leaving school are required to register at employment exchanges. No worker can leave his position or be discharged without the consent of labour exchange authorities.



sex, occupation, etc. The general act was coupled with appeals to skilled labour to volunteer for defence industries.<sup>1</sup>

An important step towards direct control was taken by the Undertakings (Restriction Engagement) Order of June 5th, 1940, which provides that workers employed in engineering, building, agriculture and coal mining must be hired through the public employment exchanges. Workers normally engaged in coal mining and agriculture may not be engaged in any other industry unless sent by an Employment Exchange. The Emergency Powers (Defence) Act of May 1940 gave the Government the power to conscript labour. The first application of the power of compulsory conscription was in January 1941, when all persons between 16 and 60 were made subject to conscription for use in combating incendiary bombs. In general, the voluntary response to the needs of the State has been on such a scale that a more extensive application of these powers has so far not been necessary.

In January 1941 it was decided to register workers for drafting into war production. Employers in certain occupations are forbidden to discharge workers, and workers to leave work without the consent of a National Service Office. One purpose of the plan was defined as the creation of a permanent, mobile labour force to perform urgent tasks such as repair work and loading and unloading of ships.

On February 28th, 1941, workers with not less than a year's experience in shipbuilding in the last 15 years were ordered to register for national service. On March 9th, 1941, the Minister of Labour appealed for 50,000 more men and also for 100,000 women to volunteer for work in war industries; on March 16th, 1941, he announced plans for the compulsory mobilization of noncombatant men and women. The first groups required to register are men between 41 and 45 and women of 20 and 21 years of age. One purpose of this plan is to release young men for service in the armed forces and replace them by older workers. The measures for the concentration of industry, discussed above, are also intended to free labour in the consumption goods industries for the essential war industries. The Essential Work Order of March 5th, 1941, grants further powers of control; it forbids workers to leave work and employers to discharge them without the consent of the Ministry of Labour. On the other hand, it guarantees the workers a minimum weekly wage. This measure has been applied to certain vital industries such as coal-mining, shipbuilding, the iron and steel trades, etc.

<sup>1</sup> Thus, in October 1939 an agreement was concluded between the Ministry of Labour and National Service, the National Council of Port Labour Employers and the Transport and General Workers Union to set up a mobile force of dock workers to be recruited by volunteers in each port and available for work in any congested port area.

The discussion of Government control of the British labour market would not be complete without some mention of the problem of "dilution." In a system of complete Government control the State determines not only how many but also what kind of workers establishments can employ. In the United Kingdom the cooperation of labour itself was sought in order to modify practices and agreements regulating the proportion of skilled, semi-skilled, and unskilled labour in various industries. In September 1939 a first voluntary dilution agreement was tested in the engineering industry regarding the substitution of semi-skilled for some categories of skilled labour. A more general agreement in the spring of 1940 permitted a temporary relaxation of the restrictions against use of women in industry.<sup>1</sup> During the autumn of 1940 local commissions under the Ministry of Labour were set up to see that skilled labour was utilized to best advantage.

### *Vocational Training.*

To expand the supply of skilled labour steps are generally introduced to extend vocational training. In Great Britain a large-scale system was organized in February 1940 when the Ministry of Labour's training centres for unemployed workers were made available for the training of 11,000 workers with an anticipated yearly turnover of 40,000 workers. Since then the Government has pushed voluntary training on a constantly increasing scale. In Germany, under the auspices of the Labour Front, a wide network of training centres has been created; by the end of 1940 it was reported that there were 200 training centres with 16,000 instructors. Similar steps have been introduced in other countries, although so far on a less systematic and extensive scale. In France, legislation for the training of young labour has been introduced since the armistice, particularly in the field of agriculture. In Japan, under the power of the General Mobilization Act of 1938, employers and technical schools were required to introduce vocational training schemes for youths between 14 and 17 years of age. In Australia in October 1940 the newly created Department of Labour was entrusted with the training and placing of available manpower as necessitated by wartime requirements.

### *Labour Disputes.*

Strikes and lock-outs entail at once a loss of working time and waste of plant capacity. Such stoppages, moreover, may entail inter-

<sup>1</sup> The Arbitration Tribunals record all departures from established trade customs and the unions have been assured of the right to restore former practices after the emergency.

ruption of vital supplies forcing restriction of output at later stages of production, causing a cumulative decrease in final output. A limitation, if not a complete elimination of labour disputes, has therefore its place in any scheme for stretching available labour supplies.

In countries such as Germany and Italy, where even before the war wages and conditions of work were under State control, labour disputes are, of course, illegal. The authorities can effect compulsory transfers of workers from one place to another and have the power to compel workers to perform any particular jobs at prescribed rates of pay. In the German-occupied countries, to which these various forms of compulsion have been extended, labour disputes have been similarly outlawed.

In countries where the organization of the labour market was based on free collective bargaining, the attitude of the Government to this problem has been widely different. Thus in the United Kingdom the right of free bargaining was maintained at the outbreak of the war. In July 1940, an order was issued, known as the Conditions of Employment and National Arbitration Order 1940, under which strikes and lockouts are prohibited unless the dispute has been reported to the Minister of Labour and National Service and has not been referred by him for settlement within three weeks. A National Arbitration Tribunal was set up for the purpose of settling disputes which could not be settled otherwise. The tribunal consists of five members, three appointed by the Minister of Labour and two chosen for each case to represent workers and employers. A dispute is referred by the Minister to this tribunal only if, in the industry concerned, there is no collective joint machinery of arbitration or conciliation, or if such machinery has failed to reach a settlement. The resulting agreements or awards are binding on the parties. Numerous wage increases have been granted under this procedure<sup>1</sup> mainly as a result of the rise in the cost of living. Steps have been taken by the Government to keep down the rise in the cost of living.<sup>2</sup> It may also be noted in this connection that social insurance benefits have been increased and extended to groups not previously covered.<sup>3</sup>

The working of the British system has been officially summarized as follows: "Since the outbreak of war, the existing joint voluntary machinery for wage negotiations has operated successfully. Increases in wage rates have been reasonable; the authority of the unions in the

<sup>1</sup> The index of average weekly wages published by the London and Cambridge Economic Service rose by 18% between August 1939 and April 1941.

<sup>2</sup> Cf. Chapter IV.

<sup>3</sup> Furthermore, a Factory and Welfare Advisory Board has been established to consider questions of health and safety both inside and outside of the factory. The Chief Inspector of Factories has been empowered to require an employer to provide medical and welfare supervision and nursing services for his workers.

day-to-day adjustment of wages and conditions has been maintained; the freedom of opportunity to make claims and to have them discussed has enabled industrial peace to be maintained.”<sup>1</sup>

Developments in the British Dominions have been broadly similar.<sup>2</sup> In the United States there has long existed machinery in the Department of Labor for voluntary arbitration. On March 19th, 1941, the President appointed a National Mediation Board designed to avert strikes in defence industries. The Board’s jurisdiction begins whenever the “Secretary of Labor certifies to it that a controversy (excluding any dispute under the Railway Labor Act) cannot be adjusted by the Department of Labor’s conciliators.”<sup>3</sup>

### REGULATION OF AGRICULTURE

In the control of agriculture the present war has brought an intensification of measures which had been established in the pre-war decade. It is convenient to distinguish two main economic regions, the food exporting region (*e.g.*, South America, the British Dominions) and the food importing region (chiefly Europe). The problems of the food exporters are dealt with in other chapters (especially in Chapters VI and VIII) and attention may therefore be given here to the “deficiency” areas.

<sup>1</sup> Cf. “Statement by H.M. Government on Price Stabilization and Industrial Policy,” *The Times*, July 23rd, 1941.

<sup>2</sup> Thus, in Canada, the Industrial Disputes Investigation Act of 1907, relating to coal mining and public utilities, was extended in November 1939 to cover all industries engaged in defence work. Strikes and lockouts were declared illegal until a Government Conciliation Board could ascertain the facts; but the findings of the board were not binding. The act prescribed a thirty days notice of the desire to change existing working conditions. In December 1940 strikes and lockouts in all war industries were rendered illegal. Wage advances above 1926-9 levels were forbidden, but conciliation boards, composed of representatives of employers, workers, and the Government, may grant bonuses when the cost of living rises.

In Australia, as a result of the National Security Act of 1939-40, additional powers were conferred upon the Minister of Labour and National Service and the Commonwealth Conciliation and Arbitration Court not only to facilitate the settlement of disputes but to prevent their occurrence. The Court is now empowered to arbitrate intra-state disputes and, to an increasing extent, to extend a ruling to units in an industry not involved in a given dispute. The Court and the Minister are also permitted to dispense with formal arbitration procedures and to review matters which, although involving no dispute at the present time, are likely to lead to industrial unrest or to menace national security.

<sup>3</sup> In several instances the Government has ordered a resumption of work (where a strike existed) while negotiation continued. In cases where this order was ignored, the Government took over the plant. On June 9th, 1941, the Selective Service Administration notified local draft boards to “reconsider the classification of all registrants who have ceased to perform the jobs for which they were deferred.” An increasing number of industrial agreements also require notification of a desire to change conditions of work, provide for a “cooling off” period during which interruption of work is forbidden, and prescribe arbitration procedures for the settlement of grievances.

In Great Britain, producers of hops, milk, potatoes, pigs and bacon had, since 1931, been organized into Marketing Boards. Immediately after the declaration of war the two most important boards (Milk and Potatoes) were absorbed into the Ministry of Food. Some change of policy is evident in consequence: whereas in peacetime the Marketing Boards tended to favour restrictive policies to keep up prices to producers, the emphasis was now placed upon the encouragement rather than the restriction of production. Thus the Potato Marketing Board has given up the penalty of £5 per acre previously imposed on farmers exceeding their allotted quota.

Subsidies have also played a large part in the agricultural programme. Beginning with sugar-beet (1924) and wheat (1931), the system of subsidies and guaranteed prices had spread to milk, beef, sheep, oats and barley by 1939. Subsidies were also given for fertilisers and an indirect subsidy was granted to landowners through a reduction in local taxation. Just before the war the Government introduced a subsidy of £2 per acre for ploughing up old pastures. Farmers were urged to plough up 10% of their pasture.

The regulation of prices has been so designed as to encourage production while subsidizing the prices paid by the consumer. Agricultural prices have in fact risen by about 40%. The Government has entered into the market, in some cases as the sole buyer (*e.g.*, wool), in others (*e.g.*, pigs and cattle) as an important buyer. The retail prices of bread, milk, meat and bacon have been kept down by subsidies at a cost of about £100 million a year.

With a view to securing an adequate supply of labour, agricultural wages were raised from about 36 shillings a week to a minimum of 48 shillings a week in the spring of 1940. Rules have been issued to prevent the farm worker moving into industry. Thus from June 1940 farm workers may not be accepted for employment in other trades, and if they are in industry and become unemployed they must return to the land. Large numbers of women have been recruited for agricultural work.

The supply and distribution of fertilisers and feeding stuffs has also been regulated to meet certain shortages and to keep up agricultural output. Stocks of fertilisers were accumulated before war started. Maximum prices were prescribed for super-phosphate of lime and compound fertilisers in November 1939. In August 1940 purchases of potash salts were subjected to license and a single buying agency of importers and consumers was formed. Potash is the principal deficiency, as most of the world's output is from German sources. However, potash does not seem to make a vital contribution to British agriculture, at least in the short run, as the experience of 1914-18 proved.

Supplies of feeding stuffs were first allocated to merchants on a quota basis, but in February 1941 rations of imported feeds were allotted to each head of stock, with additional rations for dairy cows. In March 1941 the use of home-grown wheat for feeding stock was forbidden. The increase in arable area, estimated at some 5 million acres by 1941, is expected to contribute appreciably to the amount of feeding stuffs. Nevertheless, steps have been taken to cut down the numbers of livestock. On June 2nd, 1940, producers were ordered to reduce the number of pigs and poultry by a third by the autumn of 1940. Dairy herds, especially those of good quality, are to be maintained as far as possible, and, after them, beef cattle and sheep. Supplies of feeding stuffs are expected to be about 90% of normal for dairy herds and 75% of normal for cattle and sheep in 1941.

In Germany the war measures affecting agriculture were simply a development of pre-existing arrangements made after 1933. The Reich Food Estate (*Reichsnährstand*) has attempted to increase agricultural production by various means and so to make Germany more self-sufficient. This organization has had power to allocate land and resources to different purposes, and to compel farmers to deliver such parts of their output as may be fixed from time to time.<sup>1</sup> Control is exercised largely through the "Entry Book" (*Hofkarte*), recording all particulars relating to the farm, which each farmer must have.

The drive for increased agricultural production has concentrated on the substitution of domestic for imported feeding stuffs and on the forcing of crop yields to high levels by the use of fertilisers.<sup>2</sup> There has been much investment in land reclamation, estimated at about 1,900,000 acres, but the rearmament programme removed about 2,225,000 acres from agriculture for roads, aerodromes, camps, fortifications, etc., so that there has been a net loss of land in cultivation. Just before the war, however, this was more than covered by increased yields, partly due to favourable seasons and partly to the fertiliser programme. The development of synthetic nitrates has removed Germany's former dependence on Chilean saltpetre. Phosphates are now the principal limiting factor, as these are virtually all imported. The use of phosphates shrank from 750,000 tons to 230,000 tons from 1938-9 to 1940-1.

<sup>1</sup> Even in Germany, it seems sometimes to have been difficult to make this type of control effective. In spite of an avowed stable price policy, the Government had to increase milk and butter prices in March 1940 in the hope of inducing farmers to retain less for their home consumption.

<sup>2</sup> Agricultural consumption of fertilisers has been as follows (in thousands of tons):

	Nitrates	Phosphates	Potash
1913	210	649	536
1938	700	750	1250

Agricultural labour is another important element in the German system of control. Even before 1939 there had been a considerable flight to the towns (about 1½ million between 1933 and 1939) and the war withdrew still larger numbers. The self-sufficiency policy, by its emphasis on high yields, cover crops, etc., raised the labour requirements at the same time that rearmament and war lowered the labour supply. Mechanization is limited by the shortage of gasoline. As in England, non-agricultural establishments are prohibited from employing agricultural labour without consent of the employment exchanges, which may also compel agriculturalists in other occupations to return to the farms. Other sources of labour have been recruited by the Labour Service. Prisoners of war have been used, some Italian workers, and some labour from occupied countries.

The British blockade, as in 1914-18, has fallen with particular intensity upon the German livestock industry, dependent as it is on imports of feeding stuffs from overseas. The prohibition of the feeding of bread grains to livestock has also reacted adversely upon their numbers. The decline in livestock in its turn reacts unfavorably on the fertiliser situation.

Much of the German system of control has been extended to the conquered countries. Strict rationing of food, fertilisers, and feeding stuffs has been introduced. Policy in other countries of the "food deficiency" group has in most cases followed similar lines. Thus Switzerland has adopted a plan for agricultural self-sufficiency (March 1941) providing for the cultivation of 123,000 acres of grass land. Here again, the labour shortage is a severe one, and the Government may prevent farm workers from leaving the land, may compel unemployed workers to work on farms, and may transfer non-essential industrial workers to agriculture. In Spain, an Act of November 5th, 1940, compels farmers to expand cultivated area and production. Japan has had to regulate the production and consumption of fertilisers, and has attempted to meet her shortage of agricultural labour by transferring workers to particular regions, by encouraging cooperative labour and by making increasing use of women and children.

## CHAPTER III

### CONSUMPTION AND RATIONING

Consumption in war conditions tends to be determined not by individual choice but by military and other Government needs. Over wide areas of the world, governments have introduced systems of direct or indirect control intended either to direct resources to war purposes or to assure equitable distribution of consumers' goods and the satisfaction of minimum physiological requirements, or with both objects in view.

In the present war, the regulation of consumption has a wider scope than rationing during the last war, which was primarily intended to secure an equitable distribution of scarce supplies. Today it constitutes an integral part of war economy.

#### INDIRECT RESTRICTIONS

One of the first measures introduced to restrict consumption was price discrimination intended to increase the relative prices of luxury or "non-essential" goods, through new or steeply increased Customs tariffs, special sales taxes and so forth. Such measures were frequently introduced during the early phases of the war effort in belligerent countries, and gradually also in some non-belligerent countries as the effects of the war made themselves more seriously felt. Thus, Sweden has recently introduced high sales taxes, and similar measures are being considered in the United States, particularly in respect to durable consumers' goods which most directly compete with the production of armaments. The same purpose is served by prohibition of imports of specified goods, as in the United Kingdom and the British Dominions, or by the prohibition of manufacture, or even sale, of certain articles such as silk stockings, cosmetics, etc.

Prohibition of sale is, however, less common than the more general restriction of the production of consumers' goods discussed in the preceding chapter. Such restrictions have been applied not only to durable consumers' goods but in some cases also to non-durable or semi-durable goods—particularly textiles. They were not infrequently introduced in order to prevent undue hoarding by private individuals, generally in preparation of the more stringent measure of direct



rationing.<sup>1</sup> Thus, at the outset of war many countries limited the quantities of essential consumption goods—staple foods, petrol, soap, etc.—which could be bought at one time. These measures were made more stringent by obliging customers to register with a single retail shop and prohibiting sales to non-registered customers. France and Italy introduced “meatless” or “liquorless” days and other countries prohibited private motor traffic over the week-end. Restrictions were introduced too as to the number and composition of dishes which restaurants were permitted to serve at each meal. Most of these devices, while no doubt having some effect during a period of transition, were open to misuse and evasion—they did little to assure that the poorer classes of the population obtained their share of the supplies. They have, in consequence, tended to be replaced either by direct rationing in the case of necessities, or by outright prohibition of manufacture or sale, or by a discriminating price policy in the case of luxuries.

Amongst the indirect measures for regulating consumption may be mentioned also prescriptions relating to the quality of goods. A typical example in most European countries is the increase in the milling percentage of wheat into flour, the obligatory mixture of maize and other substitutes with wheat flour for baking, and the introduction of a “standard” bread. The sale of fresh bread has been forbidden in some cases. Similarly, the addition of artificial fibre to wool and cotton has been made obligatory in a great number of countries. The State also frequently encourages the use of substitute materials, like canvas, wood and cork, in the manufacture of footwear. The same result is obtained indirectly through the allocation of raw materials.

These policies relate mainly to the European continent, to the United Kingdom and to Japan. The situation in other countries, and in the United States in particular, is necessarily different. These countries produce on balance a surplus of foodstuffs, and such scarcities as have developed relate to durable goods. Such restriction on consumption as is being contemplated in the United States relates by and large to durable consumers’ goods and to fuel and power, while in contrast to the belligerent or occupied countries, official policy, as a part of the national effort, is to encourage and increase the consumption particularly of protective foods.<sup>2</sup>

<sup>1</sup> On the other hand, Switzerland requested the public to lay in a two-month supply of certain important foodstuffs (mainly fats and cereals) at the beginning of the war, as a part of the general policy of increasing the nation’s stocks of essential foods. This scheme was supplemented by arrangements between the government, importers and dealers to lay in reserve stocks.

<sup>2</sup> Cf. in this connection the proceedings of the “National Nutrition Conference for Defense,” held in Washington, D.C., May 26th-28th, 1941.

## RATIONING

Rationing schemes relate predominantly to food, although with the progress of the war they are being extended to cover other essential consumption goods.

In studying the national systems of *food* rationing, certain general facts have to be kept in mind. First, although the basic rations apply to what is known as a "normal" consumer, modern rationing schemes tend to take into account the relative needs of different categories of consumers according to occupation, sex, age and health. In a general survey, main emphasis must necessarily be placed on the basic rations of a "normal consumer." Average consumption, however, may differ within wide margins from these basic rations; and owing to the absence of figures on the number of persons in the various categories, no estimate of average consumption can be made. Moreover, the concept "normal consumer" varies widely from country to country; in some countries and for certain commodities average consumption is in consequence likely to be much closer to that of the normal consumer than in others. Thus women and children require less food, and in particular energy-giving food, than adult men. In consequence, if women and children are allowed "normal" rations, the consumption expressed in the equivalent of an adult male, or consumption unit, is higher than if women and children receive rations smaller than the "normal." Thirdly, owing to the changes that are continually made in rations and gaps in the information, especially for the occupied areas, it is by no means easy to give a coherent picture even of the "normal" rations in force at any given date. Finally, the food-habits and the quality of foods used differ so much from one country to another that it is often misleading to compare given rations internationally. In spite of these and other difficulties, an attempt has been made to present in a uniform manner such information as it has been possible to collect from various sources.<sup>1</sup> Rations have throughout been converted into grammes per week; for reasons of comparability the various foodstuffs have been brought together into a few main food groups within which substitution is generally possible. Where not otherwise indicated, rations relate to the beginning of 1941.

The bulk of calorie requirements is obtained from *bread* or *cereals*. These foods also assume a particular importance because the absolute consumption of bread generally increases with falling income. Bread is not only the chief, but also one of the cheapest sources of calories, and as other sources of energy become dearer or more scarce, demand for bread increases. Quantities of bread which are ample in peace-

<sup>1</sup> The U.S. Department of Agriculture has generously put at the disposal of the Economic, Financial and Transit Department its documentation on wartime rationing.

time may be inadequate in wartime to satisfy the increased demand for calories resulting from the rationing, or scarcity of other foods.

Bread, considered as "the staff of life" in the Western World, has been shown by studies on family consumption to serve normally as a "budget regulator" making up for quantitative deficiencies in other, more expensive foods. It is shown by experience that demand for bread increases when other foods are rationed and bread is left free.<sup>1</sup> A ration on an apparently high level according to peacetime standards does not by itself prove that the ration is sufficient when measured in terms of the increased wartime demand.<sup>2</sup> The availability of unrationed bread in a country, therefore, has a wider significance than is apparent at first sight.<sup>3</sup>

Again, food habits differ from country to country; thus home baking is most common in the Scandinavian countries; rye bread is more commonly consumed in Eastern and Northern Europe than elsewhere; macaroni takes, to a point, the place of bread in Italy. For this reason, flour and cereals have, insofar as possible, been converted into their equivalent of bread. Information as regards cereals is, however, less complete than for bread. Bread rations for a "normal consumer" in most European countries for which information is available appear to fluctuate roughly between 2 and 2.5 kgs. per week. Rations definitely below this level are found in Poland, Belgium, Spain and France. Bread is still unrationed in the United Kingdom, Switzerland and Italy; in the last two countries, however, macaroni and cereals, which constitute an important part of total consumption, are rationed.

Rations to the normal consumer, it should be noted, mean by themselves relatively little; average consumption is affected by the common practice of granting extra rations to heavy workers and farmers, and by differences as regards children's rations.

While *sugar* consumption tends to increase with income, the nutritional value of this food is negligible except as a source of energy. But a greater number of calories can be produced from a given area under sugar than from any other staple crop. It is not surprising to find, therefore, that sugar rations vary greatly from

<sup>1</sup> Bread consumption in the United Kingdom increased from 2.1 kgs. to 2.5 kgs., or by nearly 20%, between 1915 and 1918. An increase of bread consumption during the last year is reported from the United Kingdom and Switzerland.

<sup>2</sup> The only rationing system at the present time which takes direct account of the function of bread as budget regulator is the Spanish; bread rations fall as incomes increase, forcing the higher income groups to use a higher proportion of the more expensive calories. Extra rations to heavy workers, indirectly, serves the same discriminatory purpose.

<sup>3</sup> A limitation of total bread consumption is obtained also if the price of bread is high in relation to the available purchasing power. Bread can serve as budget regulator only as long as its cost is low in relation to available purchasing power.

**TABLE I**  
*Legal Rations of Certain Groups of Foods Early in 1941. (Grammes per week\*)*<sup>a</sup>

x: rationed, amount not known. Blank: indicates no information available.

	Date	Bread and Flour b	Cereals	Sugar, Jam, etc. c	Meat, Meat- prod., etc. <sup>d</sup>	Milk	Cheese	Eggs (Nos.)	Fats e	Coffee, (Tea, Cocoa)
Great Britain: normal consumer.....	Jan. 1941	free	free	255	(1sh.2d.) <sup>1</sup> ( 6d.)	free	30 <sup>3</sup>		230 <sup>2</sup>	57 gr. tea
children under 6 years.....		"	"	255		"			230	
Italy: normal consumer.....	Jan. 1941	free	470	115	"		"		95	"
heavy worker.....		"	610 <sup>1</sup>							
Germany: normal consumer.....		2400	150	340 <sup>1</sup>	500 <sup>2</sup>	nil	50	1.5	270	100 <sup>3</sup>
heavy worker.....		3800	150	340	1000	"	50	1.5	395	100
very heavy worker.....	Jan. 1941	4800	150	340	1200	"	50	1.5	740	100
children under 3 years.....		1100	265	360	250	5250	50	1.5	125	
" 3-6 years.....		1100	265	360	250	3500	50	1.5	190	
" 6-10 years.....		1700	150	385	500	1750	50	1.5	260	
" 10-14 years.....		2400	150	385	500	1750	50	1.5	260	
Belgium: <sup>2</sup> normal consumer <sup>1</sup> .....	Feb. 1941	1575	46	280	245	nil		"	105	90 <sup>2</sup>
Bulgaria: normal consumer.....						free	300		200	
Denmark: normal consumer.....	Feb. 1941	2280	235	465	free	free	free <sup>1</sup>	free <sup>1</sup>	350 <sup>1</sup>	30
heavy worker.....		2980	235	465	"	"	"	"	350	30
very heavy worker.....		3680	235	465	"	"	"	"	350	30
children under 6 years.....		1190	235	465	"	"	"	"	350	nil
France: <sup>3</sup> normal consumer.....	April 1941	1925 <sup>1</sup>	135	115	250 <sup>2</sup>	nil	75	"	100	60 <sup>2</sup>
heavy worker.....		2450	135	115	310	"	75	"	100	60
children under 3 years.....		700	135	230	250	750	75	"	100	nil
" 3-6 years.....		1400	135	115	250	750	75	"	100	60
" 6-14 years.....		2450	135	115	250	250	75	"	100	60



# FOOTNOTES TO TABLE I:

\*One ounce = 28.35 grammes. \* Weekly rations; calculated on basis of 4.3 weeks per month. <sup>1</sup> Equivalent in bread: (1 kg. flour = 1.3 kg. bread). <sup>2</sup> Equivalent in sugar: (1 kg. jam = 0.5 kg. sugar). Extra rations for preserving have been evenly distributed over the year. <sup>3</sup> As purchased, including bone, waste, etc., excluding poultry and game. <sup>4</sup> Total fats: including butter, margarine, lard, vegetable oil, etc. <sup>5</sup> Scarce. <sup>6</sup> Substitute only. <sup>7</sup> Potatoes are rationed in Belgium, France and in the Netherlands; the weekly rations per normal consumer are 3500 gr., 700 gr., and 1500 gr., respectively.

## GREAT BRITAIN:

<sup>1</sup> Meat (including beef, veal, mutton and pork) is rationed on a value basis. Permissible purchases were gradually decreased from 2sh.2d. in December 1940 to 1sh. in March 1941. The quantity of the ration thus differs according to the quality bought, but by way of illustration it may be mentioned that in early 1941 1sh. bought 1 lb. of beef or 1.4 lb. of mutton. Certain meat products (such as sausages) are unrationed. <sup>2</sup> Small parts of fat unrationed. <sup>3</sup> An increase of the cheese ration to about 60 gr. per week and a simultaneous decrease of the butter ration is planned from June 30th, 1941.

## ITALY:

<sup>1</sup> Extra rations for heavy workers introduced in spring 1941. Bread later became rationed in certain regions. <sup>2</sup> Three-sevenths of ordinary supply, say about 100 gr. for a working class family. No restrictions on mutton and goat meat. <sup>3</sup> Fat content legally reduced by 50%. <sup>4</sup> Real coffee available only for army and hospitals.

## GERMANY:

<sup>1</sup> Including jam, converted at the official rate: instead of 600 or 700 gr. jam, 450 gr. sugar may be obtained. <sup>2</sup> Meat rations reduced by 20% from June 2nd, 1941. <sup>3</sup> Coffee substitutes; occasionally part of ration convertible in small amount of coffee or tea. Cocoa (substitute) occasionally allotted to children.

BELGIUM: <sup>1</sup> Heavy workers get extra rations for bread, meat and fats.

DENMARK: <sup>1</sup> Fat content legally restricted to 20%.

## FRANCE:

<sup>1</sup> Bread rations in France have frequently been changed; in November 1940, 2450 gr. per week; in January 1941, 2100 gr.; in March, 1400 gr. <sup>2</sup> The meat ration has been reduced to 177 gr. in June 1941.

## HUNGARY:

<sup>1</sup> Two meatless days per week. <sup>2</sup> Fat ration in Budapest: 240 gr. per person per week.

## NETHERLANDS:

<sup>1</sup> Previously ration for normal consumer had been 400 gr. per week, but this period was generally extended to 10 days; for May 1941, ration was set at 208-241 gr. + 44 gr. poultry. <sup>2</sup> Ration for May 1941: Infants and children get 3500-7000 gr. according to age. <sup>3</sup> Rations for May 1941.

## NORWAY:

<sup>1</sup> Meat unofficially rationed at about 600 gr. per week, but generally scarce and difficult to obtain. <sup>2</sup> Fat content legally restricted to 25%.

## POLAND:

<sup>1</sup> The situation with regard to meat is unclear, and widely different figures are reported; above, the highest and the lowest estimates are given. These figures possibly refer to different categories of consumers.

PROTECTORATE: <sup>1</sup> Fat content of milk for sale reduced from 3.6% to 2.5%

## FINLAND:

<sup>1</sup> Rations reduced as from June 1st, 1941 to 1820 gr. for normal consumer, 2760 gr. for heavy, and 3900 gr. for very heavy, worker per week. <sup>2</sup> Including sirup. <sup>3</sup> Rationed by value: 30 F.Mk. at the end of 1940, 24 F.Mk. in March and 12 F.Mk. in June 1941. 24 F.Mk. bought about 150-300 gr. of meat, according to quality, in March. <sup>4</sup> Included in fat ration. <sup>5</sup> From June 1st, 1941: eggs may be purchased instead of meat (about 10 eggs instead of monthly meat ration).

SPAIN: <sup>1</sup> Rations vary inversely with income groups.

## SWEDEN:

<sup>1</sup> Rations including cereals. Separate allowance for peas and beans. <sup>2</sup> Heavy workers and young persons between 7-18 get extra rations. <sup>3</sup> From April 1st, 1941. Ration exclusive of bones. <sup>4</sup> Ration includes butter and margarine. <sup>5</sup> Ration for cheese with fat content above 30%; other cheese, unrationed.

SWITZERLAND: <sup>1</sup> Flour rationed. <sup>2</sup> From May 1941 two meatless days per week.

JAPAN: <sup>1</sup> 60 gr. of sugar in rural areas, 90 gr. in cities.

country to country.<sup>1</sup> The list is topped by Denmark followed by Sweden with rations above 400 grammes per week. Rations between 300 and 400 grammes are allowed in Germany and Belgium, of 280 in the Netherlands and of 200 grammes in Norway. Rations in other countries are, throughout, low and sometimes negligible.

Any comparison of *meat* rations is complicated by the number of items contained under this heading and differences in quality. This group is the chief source of animal proteins, and, to a lesser extent, of vitamins. Meat was still unrationed in the spring of this year in Denmark, Norway and Switzerland. Of rationed countries the largest amounts were allowed in Sweden, the United Kingdom and Germany, probably in this order, though the nominal meat rations are roughly the same, or about 500 grammes per week. The Netherlands and Belgium follow with rations of 400 and 350 grammes, respectively, but consumers have not been able to obtain full rations. Rations of some 200/250 grammes are found in France and Finland, while allowances in Poland and Spain would appear to be more or less nominal.<sup>2</sup>

*Fish* is generally exempt from rationing<sup>3</sup> owing to the uneven supply and its highly perishable character. In most countries, however, the catch of seafish has decreased and fish is scarce. *Poultry* and *game* are generally unrationed but difficult to obtain. Practice regarding *sauces* and other charcuteries varies widely. These products are included in the German meat ration, and are unrationed in the United Kingdom. Another significant difference relates to bones and waste. Most European rations include a determined proportion of bones, but the Swedish ration, for instance, relates to pure meat. This factor alone introduces a margin of error in international comparisons of as much as 20 to 30 per cent.

*Fats* are the most concentrated source of calories available. The continent of Europe, on balance, is largely dependent on imports of feeding stuffs for its production of animal fats. Fats are the most generally, and the most severely, rationed of all foodstuffs. Again, national habits of consumption differ. Olive and other vegetable oils are used predominantly in Southern Europe, while fat in Northern Europe takes the form of butter, margarine or lard. Most rationing systems maintain a relatively stable total ration,

<sup>1</sup> The habits with respect to consumption and making of jam, marmalade, etc., differ from one country to another. In order to get comparable figures it is necessary to convert jam, etc., into its equivalent in sugar. The rations as given above include not only such equivalents but also, insofar as possible, extra sugar rations granted from time to time for home-preservation of fruit.

<sup>2</sup> Meat hardly enters into the normal diet of the people in Japan.

<sup>3</sup> Plans for the introduction of a fish rationing in Norway during the spring of 1941 have been announced. The normal fish consumption per head is exceptionally high in this country.

but show variations as to the kind of fats purchasable from month to month. Useful comparisons can be made only on the basis of total rations.<sup>1</sup> The highest rations are found in Denmark amounting to 350 grammes per week, followed by Norway and Sweden. Rations varying between 250 and 300 grammes are permitted in Germany and the Netherlands; the rationed portion of fat in the United Kingdom is 230 grammes to which should be added unrationed but scarce vegetable fats. Very low rations obtain in Belgium, Poland, France, Italy and Spain. The allotments to special categories of consumers differ from one country to another, again making it impossible to compare average consumption.

In view of the unique nutritional value of *milk*, and the necessity of this food for the healthy development of children, special interest attaches to its consumption. Milk is still nominally free in some countries: Denmark, the Netherlands, Norway, the United Kingdom,<sup>2</sup> Sweden and Switzerland. But it is a relatively expensive food and consumption is, in any case, largely determined by the purchasing power among the great masses of people.

On the other hand, in some countries normal consumers are permitted no full milk. This is the case, for instance, in Germany. France and Belgium. It is easy, however, to overestimate the effect of this prohibition on average consumption. Milk is consumed very largely by children, and the average wartime consumption of a family group is often maintained through the relatively liberal rations to children.

Owing to the attempt of most countries to maintain essential supplies of liquid milk and, at the same time, to assure the greatest possible butter production, cheese tends to be scarce and its fat content in many countries reduced. Rations in most countries are low. Although *eggs* are sometimes unrationed they are mostly scarce or difficult to obtain.

The import of *coffee*, *tea* and *cocoa* into the continent of Europe is practically cut off; the rations permitted, therefore, are either drawn from existing stocks or relate to substitutes. In all cases they are small.

The rationing of *clothing* presents special difficulties. Individual needs differ widely according to age, sex, occupation, and social position. Clothing is semi-durable in character, and the "need" for

<sup>1</sup> In considering these, it should be remembered also that when the supply of fat from other sources—in particular meat, cream, cheese and whole milk—has decreased, the decrease in total fat consumption is greater than indicated by the rationing of fat purchased as such.

<sup>2</sup> Plans have been announced for the introduction of milk rationing in the United Kingdom for the autumn or winter of 1941. Meanwhile, the domestic consumption of milk has been cut by one-seventh.



clothing depends inter alia on the individual's own supply. Within wide limits, existing supplies can be made to last longer, and temporarily bring down the need for new purchases far below the level that can be maintained in the long run.

It is understandable, therefore, that rationing of clothing has been introduced gradually and hesitatingly. At the beginning of the war attempts to restrict consumption were generally confined to the indirect means discussed above and to rationing producers in textile raw materials. As stocks became exhausted, however, several countries had to resort to rationing; Germany was the first, rationing, in addition to clothing and footwear, table and bed linen, rugs, curtains, etc. For most articles of clothing, Germany has a system of ration cards issued to men, women, and children under 15.

Articles of clothing not covered by these cards, and various other articles such as bedding, footwear and leather goods generally, are subject to a system of buying permits (*Bezugsscheine*). This system, indeed, applies to a very wide range of commodities, and especially to commodities produced from imported materials. Application has to be made to a special board or office for a permit to purchase a specific article. In order to obtain a permit the applicant has to show that he either does not possess the article in question, or that the article in his possession is worn beyond repair. If requested, he is obliged to turn over the worn-out goods in order to obtain the purchase permit. This system has been applied to some extent also in the occupied territories. A similar system, it may be noted, has long been practised in Soviet Russia.

The German ration card for clothing contains a certain number of "points" (the cards issued in September 1940, for instance, had 150 points) and has to last for a year. Each point has a certain value: a handkerchief counts 1, a pair of stockings 4, a woman's dress 20, a man's suit 60 points, etc. In view of the varying needs, and the great number of items involved, this system restricts total consumption while leaving a certain freedom of consumer's choice within this total.

The limitation of the quantities that could be bought by each consumer tended to direct demand towards high quality goods, and particularly to woollen goods. In order to counteract this tendency, the value of the points in the purchase of low quality goods has been increased; thus while a woollen woman's dress is equal to 26 "points," a rayon dress is only 10 "points." In some of the occupied areas textiles can only be obtained by special permit, while in others, such as Norway, Denmark, France and the Netherlands, rationing according to the point system is also applied.

The card rationing system has also been introduced in Finland, Switzerland and the United Kingdom. Rationing in the last country covers clothing, cloth and footwear, but excludes secondary articles, such as hats, mending wool, thread and workers' over-alls, as well as clothing for children of less than 4 years of age. The card contains 66 points and a man's suit rates 26, a woman's woollen dress 11, etc.

*Petrol* is scarce in all the belligerent or blockaded countries, and its use for civil consumption has everywhere been severely curtailed. Except in the United Kingdom, where owners of all licensed cars obtain a basic ration of petrol, the use of private motor vehicles has almost ceased owing to lack of liquid fuel. While in the early stages of the war resort was had to indirect measures, such as "petrol-less" week-ends, these measures proved insufficient, and direct rationing was introduced. Users are normally divided into classes and priority given to persons such as physicians performing essential social services.

The continent of Europe is not self-sufficient in *coal* in normal times and the disruption of communications and the present-day demand on account of the heavy industries and the manufacture of substitute raw materials have led to serious shortages and consequential rationing. The most complete rationing system was introduced in Germany, where a point system similar to that for clothing was used; consideration was given to the number of rooms and persons per household, and the country was furthermore divided into three climatic zones. In order to avoid transportation difficulties householders are obliged to store part of the winter's supply during the summer. With the organization of the Reich Coal Cooperative ("*Reichkohlenvereinigung*"), the point system, but not the rationing, was abandoned. In France, coal shortage is mainly due to transportation difficulties and rations differ from one part of the country to another. In Denmark, Norway and also in Sweden and Finland, coal imports have dropped drastically, and severe limitation has been imposed on the use of coal; private consumers are encouraged to use wood for heating purposes. In Switzerland private consumers received about a quarter of their normal consumption. The restrictions on coal, gas and electricity in the United Kingdom, introduced at the beginning of the war, were suspended in December 1939.

Direct regulation, and rationing, of *housing* is for obvious reasons difficult to apply. The cessation of residential building, coupled with the destruction of houses particularly through aerial bombardment and forced or voluntary evacuation of the civil population from specially exposed areas, however, have in many cases caused local

shortages. This situation is met, on the one hand by rent control, and on the other, as in the United Kingdom, by obligatory or voluntary billeting of people in public institutions, schools, etc., or private homes.

Scarcities have arisen for a number of miscellaneous goods in addition to the consumption goods already mentioned. *Soap*, for instance, as containing fat, is one of the consumption goods most commonly rationed.<sup>1</sup> *Tobacco* is another commodity which has become scarce, and various measures for limiting demand and assuring a more equal distribution are applied. Cards are rarely used; commonly the purpose is achieved by increases in price, by rationing of retailers and by limitation of the quantities which customers are permitted to purchase at one time. In Germany, travel has also been rationed, in the sense that special permission has been required for undertaking longer railway journeys.

The restriction on the production, import and sale of durable consumers' goods, such as automobiles, bicycles, furniture, household machines, etc., have been discussed above. In some cases, these measures, which indirectly restrict consumption, have been supplemented by special rationing measures. Obviously, as it is impossible to ration this supply on a per capita basis for any definite period of time, this restriction of consumption is on an individual needs basis. In Germany, for instance, and many of the occupied areas the purchase and sale of most household goods is subject to special permission being obtained in each special case.

### RATIONING AND THE STANDARD OF LIVING

It is difficult, if not impossible, to arrive at definite conclusions as to the extent to which these various measures affect the level and composition of consumption and thus the standards of living of the populations concerned. But certain tentative and preliminary conclusions regarding wartime consumption may, perhaps, be drawn.

One primary purpose of limiting consumption during wartime, as pointed out above, is to keep down non-essential consumption, in order to free productive resources for war purposes. It would appear that in most countries rationing and parallel measures have drastically decreased the consumption of luxuries, of durable consumers' goods, and also of clothing and of fuel, especially coal and gasoline. Housing has been less directly affected, except in the devastated and certain other areas. Cultural, educational and recreational activities have of course been very greatly affected by the general limitation of purchasing power, the mobilization of men

<sup>1</sup> Rations are generally about 100 grs. or less per month per person; in some cases a standard soap has been introduced.

and women for national service, difficulties of travelling, and in belligerent countries by the whole war effort. On the other hand there has been an expansion of social services in some countries, in particular in the United Kingdom.

The margin by which average food consumption could be reduced without seriously impairing health and efficiency is generally a narrow one; and the object of food rationing has been rather to assure a fair distribution of such supplies as were available or could be made available without undue risk, than to restrict consumption. The following figures for the United Kingdom based on official estimates are interesting in this connection, showing the percentage distribution of total consumption expenditure among the main groups of goods and services consumed in 1938 and 1940:

	Percentage of total consumers' expenditure in	
	1938	1940
1. Food, drink and tobacco . . . . .	41	46
2. Rent, rates, fuel and light, household goods and domestic service . . . . .	24	23
3. Clothing and laundry . . . . .	12	12
4. Private motor vehicles . . . . .	3	1
5. Other travel . . . . .	4	4
6. Other goods and services . . . . .	16	14
Total . . . . .	100	100

To frame a comparative estimate of the real nutritional effects of food rations, even assuming them to be generally obtainable, is extremely difficult. Although it may be possible to compare individual items of diet from country to country or date to date, such comparison does not permit definite conclusions as to the diet as a whole. Sound diets can be composed in many ways, and substitution between different foods is a matter of indifference, as long as the diet meets certain nutritional requirements. The restriction of one food tends to increase the consumption of others, and the effects of rationing are largely dependent upon the availability of substitutes to make up for decreases in rationed, or scarce, foods. As we have seen, the scope of rationing and hence its effect on the diet as a whole, varies greatly from one country to another. The greater the scope of non-rationed foods, and the greater the field of free consumers' choice, the more difficult it becomes to draw conclusions as to the effects of rationing. On the other hand when rationing tends to cover the whole, or almost the whole, of normal consumption, such conclusions are facilitated. Indeed, perhaps the most significant difference in the systems in force is between countries which have introduced a partial rationing, while leaving total consumption free, and countries

which by extending rationing attempt to determine not only the relative consumption of various classes of food but total consumption.

Table II is intended to throw some light on this problem of food standards. Its immediate purpose is to compare the rations with normal consumption but it affords also a rough indication of present levels of consumption in at least some of the countries affected.

The peacetime figures given in the table relate to "typical working class families" as obtained from national family budget enquiries for the period nearest to the outbreak of war.<sup>1</sup> Unfortunately, similar data are not generally available for other social classes, but the importance of working class consumption makes this limitation less important than might appear at first sight. While the budget enquiries generally profess to relate to "typical" families composed of husband, wife and 2 or 3 young children, the families investigated nevertheless differ in composition and size, and in order to assure comparability they must be expressed in a uniform unit. The unit generally chosen is that of an "adult male" or "consumption unit."<sup>2</sup> In order to give comparable figures, therefore, wartime figures should also be expressed per "consumption unit" so as to give due weight to family consumption, as opposed to individual consumption. There exists no entirely satisfactory method for achieving this result and in consequence a double procedure has, insofar as possible, been adopted. In the columns for the early part of 1941 are given: (1) the rations in force per "normal consumer" expressed in kilogrammes per annum; (2) the rations per consumption unit, calculated from the total rations for a "typical" family composed of husband, wife, and 3 children aged 3, 6 and 9. The composition of this family, though roughly corresponding to the "typical" family of most family budget enquiries obviously introduces an arbitrary element in the comparison, as different results would be obtained if a different composition were postulated. Moreover, it must be recalled in this connection that owing to the absorption of a large part of the male population by the armies the average family today

<sup>1</sup> For Germany, however, the 1927/28 enquiry has been used in preference to that of 1937/38; the latter builds on a drastically reduced sample, and relates to a period which can scarcely be characterised as "normal."

<sup>2</sup> The consumption unit is based on the calorie needs of persons of different age and sex, the needs of women and children being expressed as a fraction of that of an adult male. In order to obtain figures per consumption unit, the consumption of the family is divided by its equivalent number of consumption units. The scales adopted for converting family members into its equivalent number of consumption units differs from country to country. In Table II, therefore, the figures have been taken from a recent study by the International Labour Office in which consumption figures have been converted into consumption units according to the calorie scale proposed by the League of Nations. They will differ slightly, therefore, from those originally contained in most original enquiries.

TABLE II

Comparison of Food Consumption (in kgs. per year) per "consumption unit" in the Inter-War Period, and per normal consumer and per "consumption unit" in early 1941.<sup>a</sup>

	Great Britain			Italy		Germany		Belgium		Denmark		Netherlands	
	1937/38	Jan. 41		1929/30	Jan. 41	1927/28	Jan. 41	1928/29	Feb. 41	1931	Feb. 41	1935/36	Jan./Feb. 41
	c.u.	n.c.	c.u.	c.u.	n.c.	c.u.	n.c.	c.u.	n.c.	c.u.	n.c.	c.u.	n.c.
	kgs.	kgs.	kgs.	kgs.	kgs.	kgs.	kgs.	kgs.	kgs.	kgs.	kgs.	kgs.	kgs.
Bread and flour.....	127.9 <sup>1</sup>			184.6		139.2	124.8	209.5	81.9	110.8	118.6	169.1	122.7
Cereals.....	22.0 <sup>1</sup>			58.0	24.4	7.5	7.8	4.4	2.4	5.5	12.2	6.0	7.8
Sugar, jam, etc.....	41.4 <sup>1</sup>			5.1	6.0	18.8	17.7 <sup>1</sup>	19.5	14.6	35.0	24.2 <sup>b</sup>	23.8	14.6
Meat and Meat products ..	78 sh. 1 <sup>1</sup> 6			12.3	60sh. 8d. 6	49.0	26.0	49.9	12.7	51.6		32.6	16.6
Fish <sup>c</sup> .....	(18.8) <sup>2</sup>			12.3	7	7.0		8.9		8.7		6.1	22.6
Fats.....	23.4 <sup>1</sup>			14.7	12.0 <sup>6</sup>	23.5	14.0	27.8	5.5	30.1	18.2	24.8	17.6
Whole Milk.....	112.2 <sup>1</sup>			28.8		156.8	mil	145.1	mil	94.4		173.2	91.0 <sup>a</sup>
Skimmed Milk.....	(18.8) <sup>2</sup> 2			—		1.8		—		11.2		25.6	
Cream.....	—			—		—	mil	—	mil	5.1		0.7	
Cheese.....	5.5 <sup>1</sup> 4			3.7	1.6	5.1	2.6	5.3		5.7		5.5	5.2
Eggs <sup>d</sup> .....	12.2 <sup>1</sup>			7.7		8.1	3.9	9.6		11.4		8.3	7.8
Potatoes.....	107.6 <sup>1</sup>					162.7		220.2	182.5	92.6		169.9	78.0
Fresh vegetables.....	(55.5) <sup>2</sup>			55.1		35.5		45.0				64.0	117.5
Fresh fruits.....	30.6 <sup>1</sup> 5			7.3		30.2		13.5				38.3	

TABLE II (continued)

Comparison of Food Consumption (in kgs. per year) per "consumption unit" in the Inter-War Period, and per normal consumer and per "consumption unit" in early 1941.<sup>a</sup> (Continued)

	Norway				Poland				Prot. of Bohemia and Moravia				Finland				Sweden				Switzerland			
	Feb. 41		1929		Jan./Feb. 41		1929/30		Feb. 41		March 41		1933		Feb. 41		1936/37		Jan./Feb. 41					
	n.c.	kgs.	c.u.	kgs.	n.c.	kgs.	n.c.	kgs.	n.c.	kgs.	n.c.	kgs.	c.u.	kgs.	n.c.	kgs.	c.u.	kgs.	n.c.	kgs.				
	c.u.	kgs.	c.u.	kgs.	c.u.	kgs.	c.u.	kgs.	c.u.	kgs.	c.u.	kgs.	c.u.	kgs.	c.u.	kgs.	c.u.	kgs.	c.u.	kgs.				
Bread and flour	152.5	108.2	217.0	46.8	3.6-13.0 <sup>1</sup>	40.1	26.0	27.4	141.7	118.3 <sup>1</sup>	163.9	126.3	100.6 <sup>1</sup>	151.6 <sup>1</sup>	103.0	27.3	28.8							
Cereals	5.5	10.6	10.6	4.6	—	7.2	—	—	16.7	9.1 <sup>b 2</sup>	13.7	6.9	22.4 <sup>b</sup>	33.7	20.0	9.1 <sup>b</sup>	9.6							
Sugar, Jam, etc.	27.0	10.4 <sup>b</sup>	15.7	20.5	6.5	29.3	15.6	8.0	11.9	29.9	7.8-15.6 <sup>3</sup>	11.7	49.3	39.2	35.5	1	—							
Meat and Meat products	43.1	1	46.8	3.6-13.0 <sup>1</sup>	—	40.1	26.0	27.4	34.8	7.8-15.6 <sup>3</sup>	11.7	49.3	26.0 <sup>3</sup>	39.2	35.5	1	—							
Fish <sup>1</sup>	49.3	16.4	24.7	5.7	3.1	19.8	—	—	16.0	9.1	23.5	18.1	13.0 <sup>4</sup>	20.6	18.9	9.9	10.4							
Fats	28.6	16.4	24.7	5.7	3.1	19.8	—	—	20.4	9.1	13.7	24.8	13.0 <sup>4</sup>	20.6	18.9	9.9	10.4							
Whole Milk	161.0	77.5	77.5	5.8	nil	154.5	—	—	309.8	72.8	197.3	243.5	243.5	270.0	270.0	—	—							
Skimmed Milk	44.9	5.8	5.8	5.8	nil	—	—	—	21.7	8.0	197.3	8.0	8.0	—	—	—	—							
Cream	8.1	1.8	1.8	1.8	nil	—	—	—	5.3	6.8	11.7	6.8	3.1 <sup>b</sup>	4.7	6.6	6.6	—							
Cheese	8.6	1.8	1.8	1.8	1.2	3.7	—	—	1.1	4	6.8	6.8	3.1 <sup>b</sup>	4.7	6.6	6.6	—							
Eggs <sup>4</sup>	7.2	2.9	2.9	2.9	1.2	8.5	—	—	3.2	5	11.9	11.9	11.9	65.6	65.6	65.6	—							
Potatoes	93.5	202.1	202.1	20.2	—	100.5	—	—	114.7	1.6	2.0	33.7	33.7	66.7	66.7	66.7	—							
Fresh vegetables	15.6	57.7	57.7	5.7	—	37.8	—	—	1.6	2.0	2.0	33.7	33.7	66.7	66.7	66.7	—							
Fresh fruits	14.0	6.4	6.4	6.4	—	33.1	—	—	—	—	2.0	33.7	33.7	66.7	66.7	66.7	—							

FOOTNOTES: See following page.

# FOOTNOTES TO TABLE II:

For further information, cf. footnotes, Table I. <sup>1</sup> Inter-War-Period figures from the "International Survey of Recent Family Living Studies," International Labour Review 1939, Vol. XXXIX, pp. 814 ff., except where otherwise indicated. The scale adopted in converting "family members" into "consumption units" is that of the League of Nations, except in the case of Italy. <sup>2</sup> Jam apparently not rationed. <sup>3</sup> Fish not rationed but generally scarce. <sup>4</sup> Eggs generally scarce.

## GREAT BRITAIN:

<sup>1</sup> Figures from the 1937/38 family budget enquiry (Ministry of Labour Gazette, December 1940), converted into quantities per consumption unit. <sup>2</sup> Figures from E. M. H. Lloyd: "Food Supply and Consumption at Different Income Levels," Journal of the Proceed. of the Agricult. Econ. Soc. Report of the Conference held in London, December 1935. Original figures for 1934 relate to per capita consumption of families with a weekly food expenditure of 10sh. These are converted into rough figures per consumption unit. <sup>3</sup> Condensed milk. <sup>4</sup> Excluding boxed cheese. <sup>5</sup> Apples, oranges, bananas. <sup>6</sup> Beef, mutton, veal and pork. The corresponding quantity of meat consumed in 1937/38 was, on the basis of the official budget enquiry quoted above, 34.9 kgs. per year per consumption unit. According to prices of meat in Oxford, March 1941, used by T. Schultz in "A 'Human Need' Diet in Wartime" (Institute of Statistics, *Oxford Bull.*, April 1941, Vol. 3, No. 5), the yearly consumption of rationed meat per consumption unit (calculated as above) would roughly be about 40 kgs., whilst the corresponding figure per normal consumer can be calculated at about 33 kgs. In considering these figures, however, it should be noted that they exclude bacon, ham, sausages, etc., the consumption of which is large. Thus, according to the 1937/38 family budget enquiry, the yearly consumption of ham, bacon, etc., amounted to 10.9 kgs. per consumption unit. Pigmeat, however, except bacon, is included in the meat ration, while bacon is rationed separately at 4 ounces per week or at 5.9 kgs. per year per normal consumer. <sup>7</sup> According to T. Schultz, the possible weekly consumption of fish amounts to 1 pound—compared with 2½ pounds in peace time—per family of five. <sup>8</sup> T. Schultz estimates possible purchase of unrationed fats of ¼ pound per week per family of five, corresponding to a yearly consumption of 1.6 kgs. per consumption unit.

## ITALY:

<sup>1</sup> Inter-War-Period figures from: A. Niceforo and G. Galeotti: "Primi risultati dell' inchiesta alimentare condotta in varie Provincie d'Italia," *Quadermi della nutrizione*, May 1934, Vol. 1, No. 1. <sup>2</sup> Butchers, retailers and consumers rationed to 3/7 of ordinary supply. Mutton and goat meat unrationed.

## GERMANY:

<sup>1</sup> Including jam, converted at the official rate: at 600 gr. or 700 gr. of jam = 450 gr. of sugar. <sup>2</sup> Including artificial honey for children; converted at 100 gr. of honey = 75 gr. of sugar.

## NETHERLANDS:

<sup>1</sup> Rations for May 1941; infants and children receive 3500-7000 gr. per week.

## NORWAY:

<sup>1</sup> Unofficially rationed at about 600 gr. per week (31 kgs. a year).

## POLAND:

<sup>1</sup> The situation with regard to meat rationing is unclear; and widely different figures are reported; above, the highest and the lowest estimates are given. These figures possibly refer to different categories of consumers.

## FINLAND:

<sup>1</sup> Rations include cereals. <sup>2</sup> Rations include sirup. Jam scarce. <sup>3</sup> Rationed by value: varies from month to month. <sup>4</sup> Ration included in fat ration. <sup>5</sup> Eggs may be purchased instead of meat. From June 1st, 1941, about 10 eggs per month instead of meat ration.

## SWEDEN:

<sup>1</sup> Rations include cereals. <sup>2</sup> Extra ration for young persons of 7-18 not included. <sup>3</sup> From April 1st, 1941. Ration exclusive of bones. <sup>4</sup> Fat ration includes butter and margarine; small separate allowances for other edible fats, as lard, olive oil, etc., are granted. <sup>5</sup> Ration for cheese with a fat content above 30%; other cheese, free.

## SWITZERLAND:

<sup>1</sup> From May 1941, two meatless days per week.



in Europe is frequently different from the typical pre-war family. Nevertheless, the two columns showing consumption per consumption unit are more comparable with each other than is the column showing consumption of the "normal consumer" with either of them. The difference between the two last columns illustrates the effects on the level of consumption of the system of allowing different rations to men, women and children. The consumption unit is a uniform measure, while the individuals of varying age composing a population are not uniform. The so-called "normal consumer" is the individual who receives the "normal" ration. None of these figures represents average consumption per head of population.

It will be observed that one group of countries, including Germany, Belgium, the Netherlands, Poland, Finland, and France, has an almost complete rationing system in the sense that, at least in theory, the chief foodstuffs are subject to rationing, and that there are few unrationed articles of diet on which the normal consumer can fall back. In Germany and Finland, however, potatoes are unrationed. In contrast to this group of countries, the United Kingdom and Italy both ration fats and meats and, to a lesser extent, milk and milk products, while leaving free cereals (in particular bread), and, as almost everywhere, fruits and vegetables. Owing to the importance of bread as budget regulator, these systems leave the total caloric consumption, as well as the most important vegetable protective foods, free.

In the Scandinavian countries bread, fats and (with the exception of Denmark) meat are subject to rationing, while milk and dairy products (with the exception of cheese in Sweden) are left unrationed. While this, in theory, should facilitate a sound composition of diet from a nutritional standpoint, the relatively high prices and limited supplies of the free products prevent them from being used to make up more than partially for shortages of calories caused by rationing of the staple foods.

In order to obtain even a general idea of the effects of rationing on the actual diet, it is necessary to consider first the changes in the supply of calories used, and, secondly, the general composition of diets and the availability of protective foods.

In Germany the rations plus the unrationed foods would appear to allow of a consumption of calories not materially different from that of a working class family before the war. The diet is, however, as indicated below, much reduced in proteins, vitamins and other protective foods. The situation in Belgium and Poland is much more serious; actual rations represent a very drastic reduction as compared with normal consumption. In view of the winter scarcities of fruit and vegetables in these countries, and the rationing of potatoes,

there was very little possibility of making up for the decrease in rationed foods. Indeed, it would seem that the calorie content of rations, even if increased by the full amount of calories normally obtained from unrationed foods—an optimistic assumption—are not more than about half of the normal consumption, and are thus far below what is generally accepted as a physiological minimum. Moreover, the scanty rations would appear to be frequently unobtainable.

In France the legal rations afford a very inadequate basis for judging the real situation. A large proportion of the population is agricultural and can consume larger quantities of various foods than are available to the rationed urban population. Moreover, communication between the occupied and unoccupied zones is rendered extremely difficult and means of transporting food have been so generally curtailed that there are very great local differences and serious local shortages.

In Finland the situation would appear to have deteriorated rapidly during the first half of this year. The bread ration, as is indicated in a footnote to Table I, was reduced in June by 20% and is now only slightly higher than in Poland. In the Netherlands the bread rations are relatively high, but 10% of barley flour is now being mixed with the wheat.

Both in Switzerland and the United Kingdom bread is unrationed, and special efforts are made to increase the domestic production of vegetables so as to compensate for the decrease in imports. In Italy, likewise, bread is theoretically free; it is doubtful, however, to what extent the level of consumption can be maintained in view of the poverty of the great mass of the people. Of the Scandinavian countries the calorie intake seems to have been seriously reduced only in Norway. The ample rations allowed in Sweden and Denmark at the beginning of this year have since been reduced, but remain superior to those in most European countries.

An adequacy of calories is of vital importance, but in order to maintain health and efficiency the diet must contain, in addition to carbohydrates, suitable proportions of proteins and fats, vitamins and mineral salts, etc., elements contained mainly in the protective foods. The composition of the diet has, in fact, changed in most countries even more than its calorie content. But this very change in composition makes it difficult to judge the probable effects of the various rationing systems.

Available evidence seems to indicate that the most serious deficiency in proteins is experienced in Poland and Belgium. The situation is probably somewhat less serious in France except in certain localities, and is clearly better in the Netherlands and prob-

ably also in those parts of Norway where fish are available for consumption. The decrease in protein rations in Germany clearly seems to be greater than in the United Kingdom where, moreover, the peacetime consumption was higher and certain meat products are unrationed. Denmark, Sweden and Switzerland would appear to have best maintained the protein content of their diet. The situation as regards fats would seem to resemble that for proteins.

The intake of vitamins and mineral salts is determined mainly by the consumption of protective foods such as milk, eggs, fruits and vegetables. On the whole, supplies of milk for the domestic market have been relatively well maintained in the United Kingdom, Germany, the Scandinavian countries, Switzerland and the Netherlands. Serious shortages, however, appear to have arisen in many of the occupied areas. But milk consumption varied very widely before the war from country to country. It was highest in Finland and remains high there although the winter ration involved a heavy reduction. In June, when the bread ration was reduced by 20% and the meat ration by over one-half, the milk ration was increased by a third. In Germany the normal consumer obtains no full milk at all, all available supplies being allotted to children, nursing and expectant mothers, and invalids. Milk is perishable and serious local shortages have arisen in France where the consumption has always been low, and elsewhere in Europe owing to the shortage of petrol and general difficulties of transport. Transport difficulties naturally affect the distribution of vegetables in the same way. Almost all European countries have taken steps to increase the production of green vegetables, which remain unrationed. The United Kingdom and the countries on the west coast of Europe and on the Mediterranean are clearly better placed to maintain supplies throughout the year than those with a continental climate. This fact must go far to determine the extent to which different areas have been able to avoid vitamin and mineral deficiencies.

When considering the general effects of food shortages and of rationing it is necessary to bear in mind that the armies are not subject to civilian rations and normally receive substantially more than the civilian population. Consequently the average consumption per head of population, quite apart from the fact that farmers and those engaged on heavy work often receive special rations, is higher than the figures considered would suggest. Furthermore, most rationing systems are so devised that the consumption by children is less reduced than is that by men in normal employment—especially the consumption of milk and such other protective foods as may be rationed. As men have been largely drawn from their homes into the army, the consequence is that the average consumption of the

members of the family remaining at home is probably rather better, when the rations can in fact be obtained, than Table II suggests.

There is little evidence of widespread lack of energy-producing foods in Europe during the last winter except in Poland and Belgium, Spain, parts of France and Norway, and in Finland, where the 1940 harvest was bad, an important agricultural district was lost, and overseas trade could only be conducted on a greatly reduced scale. These same countries, and especially Poland, would appear to have suffered most from insufficiency of vitamins and mineral salts, though some districts in France in which bread was short had fair supplies of milk, or citrous fruits or other protective foods.

The European countries whose normal diet has been best maintained during the period under review are Denmark, Sweden, Switzerland and Portugal.

## CHAPTER IV

### PUBLIC FINANCE, MONEY AND PRICES

#### GOVERNMENT EXPENDITURE<sup>1</sup>

Since 1939, total Government expenditure has increased four-fold in the United Kingdom, three-fold in Australia and Canada, twice or more than twice in Germany, Italy, France and Sweden; and not much less than twice in the United States, New Zealand, South Africa, Japan and the U.S.S.R. (See Table 1, Column 5). These are the twelve countries shown in Table 1 where recent changes in government finance are briefly illustrated. Similar rates of increase in Government expenditure have been observed in other countries including, for example, Belgium, Finland, the Netherlands and Switzerland.

It goes without saying that the expansion of Government expenditure has been due to defence or war expenditures. Non-military expenditure, as may be seen from Column 4 of Table 1, has in most cases remained stationary. In a few cases it has even declined. Reduction of non-military government expenditure has, indeed, been one of the possible ways of financing the rise in military expenditure. Thus, in 1940, the New Zealand Government announced its intention of reducing public works *pari passu* with the increase in war expenditure. Canada and the United States, in fact, achieved an appreciable net reduction in expenditure not related to war. On the whole, however, the possibilities of financing war expenditure by curtailment of other government expenditure have been very limited. Reductions have been effected in certain items such as unemployment relief and public works. But these have often been more than offset by increases in administrative expenses due to the extension of Government controls in the transition to war economy. It is not always possible, indeed, to make a sharp distinction between war and non-war expenditure, especially in countries with a highly organized and planned war economy. The administrative cost of price and production controls, for instance, though it may figure under non-military expenditure, may really be part of the cost of armament production. The rise in

<sup>1</sup> Unless otherwise indicated, terms such as "Government expenditure" or "Government revenue" refer to the national, central or (in the case of a federal state) Federal Government, as distinct from provincial and similar local governments.

*Table 1—National Income and Government Finance*  
(In millions of national currency units)  
(For notes see opposite page)

Country Currency Fiscal Year	Fiscal Years	Nat. Inc.	Government Expenditure				Tax Receipts	Incr. of Dom. Debt
			War Expen- diture	% of Nat. Inc.	Non-War Expen- diture	Total		
UNITED KINGDOM	1938/39	4415	400	9	668	1068	896	135
£	1939/40	...	1141	...	680	1821	1017	652
Apr. to Mar.	1940/41	5586	3220	57	664	3884	1359	2489
	1941/42	...	3500	...	707	4207	1759	...
AUSTRALIA	1938/39	788	14	2	84	98	74	18
£A	1939/40	863	55	6	86	141	90	47
July to June	1940/41	...	181	...	90	271	126	74
CANADA	1938/39	3837	64	2	517	581	434	86
C.\$	1939/40	4040	223	5	572	795	465	403
Apr. to Mar.	1940/41	4594	1344	28	514	1859	776	863
	1941/42	...	2300	...	468	2768	1364	...
NEW ZEALAND	1938/39	167	3	2	43	45	32	14
£NZ	1939/40	...	7	...	48	55	35	18
Apr. to Mar.	1940/41	200	27	14	45	72	51	26
	1941/42	...	70	...	42	112	52	...
SOUTH AFRICA	1938/39	.	2	.	62	64	33	16
£SA	1939/40	.	2	.	63	65	34	8
Apr. to Mar.	1940/41	.	60	.	68	128	50	53
	1941/42	.	72	.	59	131	52	...
U.S.S.R.	1938	.	27044	.	96956	124000	(127500)	...
Roubles	1939	.	40835	.	112215	153100	(155900)	...
Jan. to Dec.	1940	.	57066	.	115193	173259	(178080)	11397
	1941	.	70865	.	144508	215373	(216161)	...
FRANCE	1938	250000	27127	12	55424	82551	54258	...
Fr.F.	1939	...	110974	...	74623	185597	63657	...
Jan. to Dec.	1940	...	133400	...	79900	213300	...	...
GERMANY	1938/39	79700	(27000)	(34)	(8000)	(35000)	17691	11222
RM	1939/40	95000	(40000)	(42)	(10000)	(50000)	23447	21240
Apr. to Mar.	1940/41	100000	(58000)	(58)	(12000)	(70000)	27205	37709
ITALY	1938/39	90000	13594	15	(26259)	39853	30592	...
Lire	1939/40	125000	...	...	...	60389	32350	...
July to June	1940/41	...	...	...	...	96000	29003	...
JAPAN	1938/39	19000	6097	32	1987	8084	1876	4588
Yen	1939/40	24500	6468	26	2484	8952	2239	5563
Apr. to Mar.	1940/41	...	7764	...	3270	11034	3147	7572
	1941/42	...	9130	...	4075	13205	3691	...
UNITED STATES	1938/39	67500	1162	2	7544	8706	5480	3278
U.S. \$	1939/40	71600	1559	2	7439	8998	5656	2528
July to June	1940/41	79700	6048	7	6662	12710	7760	5994
	1941/42	...	15500	...	7169	22669	8795	...
SWEDEN	1938/39	10700	282	3	1297	1579	1070	203
Kronor	1939/40	11500	1057	9	...	...	1300	991
July to June	1940/41	...	2055	...	1323	3388	1452	1545

NOTES TO TABLE I—*National Income and Government Finance.*

*General.* The figures in italics represent budget estimates.

*United Kingdom.* The figures of national income refer to the calendar years 1938 and 1940. Government expenditure does not include expenditure relating to self-balancing accounts such as the Post Office. The estimates for the fiscal year 1941/42 exclude the value of supplies received under the Lend-Lease Act.

*Australia.* The figures relating to Government expenditure and taxation cover the Revenue and Loan Accounts. The figures concerning the increase in public debt include debt of the States which is managed by the Commonwealth.

*Canada.* The figures of national income represent national income "produced" in the calendar years 1938, 1939 and 1940. Government expenditure includes "Investment" and "Repatriation." The estimates for 1941/42 do not include "Investment," but take account of the Dominion requirements in connection with the financing of the United Kingdom purchases in Canada, tentatively estimated at \$8/900 millions. War expenditure includes also advances to Government corporations in connection with munitions and supplies, advances to the United Kingdom and allied governments, retirement of Canadian National Railway bonds in London, advances to the Foreign Exchange Control Board, and repatriation of sterling bonds. These items total as follows: in 1938/39, \$26 millions; in 1939/40, \$13 millions; in 1940/41, \$432 millions.

*New Zealand.* The data on Government expenditure and receipts cover the Consolidated Fund, the Public Works and the War Expenditure Accounts.

*South Africa.* Under expenditure are included both ordinary expenditure and loan expenditure on railways, forestry, other public works, etc.

*U.S.S.R.* The figures of revenue include, in addition to taxation, receipts from other sources.

*France.* The figures quoted do not cover the Amortization Fund and various Treasury accounts the operations of which are not disclosed. The figures for 1940 are ordinary budget estimates *plus* war credits. Occupation costs are not included. The data relating to Government receipts include other revenue in addition to tax receipts. Receipts for 1940 are estimated to have amounted to 40,000 million francs. No figures for public debt are available, but it has been estimated that public debt increased by some 300,000 million francs during the last two years, excluding the costs of occupation.

*Germany.* The figures refer to Germany including, since 1938, Austria and Sudetenland, but excluding occupied territories. The figures of national income relate to calendar years. Government expenditure is assumed to be equal to the total of tax receipts, increases in disclosed and undisclosed debt, administrative and miscellaneous receipts and contributions from provincial governments and municipalities as from September 1939.

*Italy.* The figures of national income relate to calendar years. The data relating to Government receipts include other revenue in addition to tax receipts. The figure for non-war expenditure in 1938/39 is an indirect estimate.

*Japan.* The national income figures relate to calendar years. The figures relating to Government expenditure and receipts cover the general account and the temporary special war account with adjustments for transfers between the two accounts.

*U.S.A.* The figures of national income are those of national income paid out. The figures for 1941/42 represent the budget estimates of August 15, 1941.

*Sweden.* The figures of national income are those of national income produced in the calendar years 1938 and 1939.

apparent non-military expenditure in Japan seems to have been largely due to this extension of Government control.

Another element which has made it difficult to cut down total civil expenditure has been the rise in the interest burden of the public debt, even though that rise has been restrained by the relatively low level of interest rates at which Government borrowing has taken place. In the United Kingdom the interest service rose from £217 million in 1938/39 to £230 million in 1940/41, in the United States from \$940 million in 1938/39 to \$1070 million in 1940/41, and in Sweden during the same period from 91 million to 101 million kronor. In Japan, the internal interest service is estimated at 900 million yen in 1940, and in Germany at about 2,900 million marks in 1941/42.<sup>1</sup>

In the principal belligerent countries war expenditure has come to constitute by far the greater part of total expenditure. In the United Kingdom and Germany in 1940/41 the proportion was over 80% ; in Japan it was 70%, and in Canada about 63%. Even in the United States, the ratio of defence to total expenditure was as high as 50% in the fiscal year 1940/41, rising considerably above 50% in the first half of 1941.

As may be seen from the table, the rate of increase of war expenditure has been much greater in the United Kingdom than in Germany. From 1938/39 to 1940/41, war or defence expenditure increased about eight times in the United Kingdom, six times in the United States, and more than twenty times in Canada. There have been similar rates of increase in Australia, New Zealand and South Africa. In Germany, during the same period, war expenditure increased not much more than twice. Germany, of course, started from a considerably higher level than the other countries just mentioned. The same is true of Japan, where war expenditure appears to have risen by little more than a quarter from 1938/39 to 1940/41.<sup>2</sup>

The great acceleration in the rate of national defence expenditure in the United States calls for special attention. As may be seen from the accompanying diagram, the acceleration has been particularly marked since the autumn of 1940. From May 1940 to May 1941, national defence expenditure rose more than five times, and its share in total expenditure increased from 24% in the former to 73% in the latter month. From March 1941, these figures include expenditures on supplies sent to the United Kingdom under the Lend-Lease Act.

<sup>1</sup> *Frankfurter Zeitung*, May 4th, 1941.

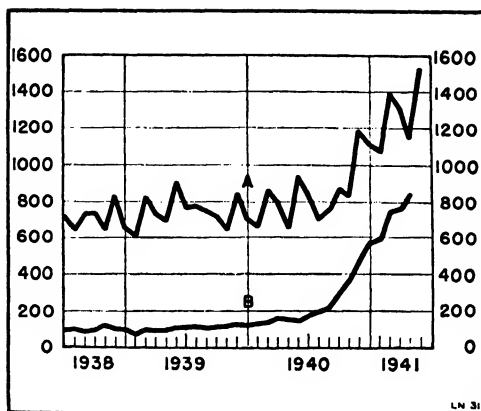
<sup>2</sup> In considering the rise in war expenditures, some allowance should be made for the rise in prices in the different countries; but it does not seem that this would greatly modify the general picture. Recent price movements are discussed later in this chapter. It will be pointed out that the official price indices, owing to the unequal incidence of price controls, etc., have become less suited for international comparisons.



*Diagram 1.*

*United States: Federal  
Government Expenditure*  
(\$000,000's)

- A Total expenditure
- B National defense expenditure



In countries where the cost of national defence has become the preponderant element in total Government expenditure, changes in the rate of defence or war expenditure are closely reflected in the movement of total Government receipts. The following table of quarterly Government receipts from taxation and borrowing in the United Kingdom, the United States, Germany and Japan thus affords an indication of the trend of expenditure. This indication is important in the case of Germany, where the amount of Government spending can only be indirectly estimated by adding up the Government receipts as published.

To judge from these figures, German Government expenditure appears to have practically stopped increasing since the middle of 1940. In Japan, the rate of increase seems to have slowed down. In the United Kingdom and the United States, there has been a considerable rise, particularly since the middle of 1940. The data would seem to suggest that in the first two of the countries just mentioned the war effort tended to approach certain definite limits, while in the last two there was ample scope for expansion.

The figures given for Germany call for two qualifications, neither of which, however, affects the observations just made. In addition to borrowing and tax receipts, there are in Germany certain other sources of internal revenue, estimated to yield approximately 5,000 million marks a year, of which the most important is a levy imposed in the autumn of 1939 on all provincial and local authorities. This levy, officially estimated to yield about 1,400 million marks a year, was to be financed wholly by economies in local administration, and was not to be passed on to the public through higher rates or charges. The general level of expenditure may, therefore, have been higher

than the total of borrowing and tax receipts; but after the levy had been introduced, the rate of German Government expenditure presumably moved roughly parallel with the sum of tax receipts and borrowings.

*Table 2—Government Receipts from Taxation and Borrowing*

(National Currency Units, 000,000's)

A. Tax Receipts; B. Increase in Internal Debt; C. Total.

		1939				1940				1941	
		I-III	IV-VI	VII-IX	X-XII	I-III	IV-VI	VII-IX	X-XII	I-III	IV-VI
U.K.											
£	A	428	141	185	196	495	180	252	290	637	302
	B	-132	152	176	340	127	513	658	799	518	758
	C	296	293	361	536	622	693	910	1089	1155	1160
U.S.A.											
\$	A	1411	1234	1395	1235	1631	1395	1594	1539	2441	2186
	B	558	454	419	1084	598	428	1105	952	1556	2380
	C	1969	1688	1814	2319	2229	1823	2699	2491	3997	4566
Germany											
RM	A	4690	5221	6179	6335	5840	6067	7351	6987	6795	...
	B	3494	3669	5243	6112	6216	8081	9484	9799	10259	...
	C	8184	8890	11422	12447	12056	14148	16835	16786	17054	...
Japan											
Yen	A	483	363	667	581	559	432	832	...	...	...
	B	1130	1103	1417	1669	1374	1418	1329	...	...	...
	C	1613	1466	2084	2250	1933	1850	2161	...	...	...

On the other hand, part of the increase in the German public debt as officially disclosed, and as shown above, may not have been used for current expenditure, but may have been offset by a reduction in the secret debt (estimated at some 13,000 million marks just before the war), which was piled up mainly during the three or four years prior to April 1938 in the form of "special bills" (*Sonderwechsel*). These bills are known to have been renewable up to a maximum of five years. If, as there is reason to believe, the bills issued in 1935 were redeemed in 1940, the level of Government expenditure in 1940 may have been some 3,000 million marks lower than the data concerning Government receipts would suggest.

In order to indicate the intensity of a country's war effort, war or defence expenditure may be expressed as a percentage of the national income. This is done in Column 3 of Table 1, showing clearly the growing share of defence expenditure in the national income in each

country. Comparison of these percentages as between different countries, however, is subject to serious reservations. There are great differences in the way in which national income is defined and computed in the various countries. Differences exist also in the scope of the figures concerning war expenditure. Nevertheless such a comparison may be of interest for purposes of illustration and is given on a purely tentative basis in Table 3 below, covering the United Kingdom, the United States, Germany and Japan for the twelve months ending March 31st, 1941. In order to make possible a rough comparison of the absolute figures—again only for illustrative purposes—these are converted into U.S. dollars at the official rates of exchange, except in the case of Germany, where approximate allowance is made for the artificial overvaluation of the reichsmark.

If the percentage share of war expenditure in the national income is intended to reflect the proportion of the national output devoted to war purposes, then Government expenditure on foreign supplies should be excluded. In the case of the United Kingdom, therefore, expenditure financed by the sale of foreign assets or by an increase in overseas liabilities is excluded. For the United States, on the other hand, an estimate of British Government expenditure in the United States is added to the United States' own defence expenditure, so as to reflect more adequately the defence effort of the United States and its total output of "war goods." Similar adjustments cannot be made for Germany and Japan; but subject to qualifications noted below for Germany, one may assume that Government war expenditure in these countries represented in the main expenditure on domestic resources.

According to these necessarily tentative calculations, Germany devoted the largest proportion—more than half—of national income to military ends. But, even though German Government expenditure in the period examined—unlike the British—was probably wholly domestic expenditure, it must be remembered that Germany received from other countries large amounts of goods and services without having to pay for them; they were paid for by issues of German currency notes in occupied countries, by tributes and charges for occupation costs, by running up debts on clearing account, and other means.<sup>1</sup> The proportion of war expenditure to the national income in Germany could probably not have been as high as it was, had Germany not had the resources of other countries at her disposal.

Moreover, it should be borne in mind that the requirements of war finance are not necessarily met entirely out of current income. The war effort may be financed in part by consumption of capital—by the

<sup>1</sup> See Chapter V.

*Table 3—National Income and War Expenditure in U.S. Dollars*

1940/41 (April 1940 to March 1941)

Country	National Income (000,000,000's)	Domestic War Expend- iture (000,000,000's)	Col. (2) as % of (1)	Popula- tion (000,000's)	National Income per head	War Expend- iture per head	Balance (Civilian consump- tion etc.) per head
	1.	2.	3.	4.	5.	6.	7.
U.S.A.....	77.0	5.4	7	131	\$588	\$ 41	\$547
U.K.....	23.4	10.1	43	48	\$488	\$211	\$277
Germany ..	29.1	16.6	57	80	\$364	\$207	\$157
Japan .....	6.1	1.8	30	73	\$ 84	\$ 24	\$ 60

*Note to Table 3.* The conversion rates used for the United Kingdom and Japan are the official rates of exchange (\$4.035 to the pound and 4.3 yen to the dollar respectively). For Germany, a rate of 3.5 marks to the dollar, instead of the official rate of 2.5 marks, is taken as representing more nearly the "purchasing power parity." (In a report of the Reichskreditgesellschaft, quoted in the *Frankfurter Zeitung* of February 6th, 1941, this "equilibrium rate" is placed even higher, namely at about 4 marks to the dollar.)

The yearly national income figures have been adjusted slightly to the period to which the table relates. The figures assumed for this period are: U.K.: £5,800 million; U.S.A.: \$77,000 million; Germany: 102,000 million marks; Japan: 26,000 million yen.

The figure assumed for domestic war expenditure in the United Kingdom is £2,500 million, about £700 million less than total war expenditure. The figure for the United States includes an estimated \$1,300 million of foreign (mainly British) in addition to the national war expenditure. Owing chiefly to these adjustments, the percentages in Column 3 differ from those in Table 1.

depletion and attrition of commodity stocks and productive equipment. As will be seen in a later section of this chapter, dealing with the sources of Government borrowing, such capital consumption amounted in Germany in 1940 to approximately 12,000 million marks, equal to nearly 20% of the estimated war expenditure or to about 12% of the national income.

Since the general level of wealth as reflected in income per head (Column 5 of the table) is very unequal in the different countries, the percentage share of war expenditure in the national income is not an adequate measure of the intensity of a country's war effort. The wealthier country can obviously devote a higher proportion of its current output to the war effort without having to lower its standard of civilian consumption (roughly indicated by Column 7) to as low a level as the poorer country. The higher a country's income per head, the larger is the margin available for war-making.

The economic limits to a country's war effort appear clearly in the case of Japan as shown in the table. Japan has been at war continuously since the middle of 1937; she has had time to organize her war economy to the limit of her capacity; and yet in 1940/41 she was not able to extract much more than a quarter of her national income for war purposes.<sup>1</sup> In a relatively poor country, obviously the margin between total production and the subsistence minimum of consumption is narrow.

In conclusion, it may be remarked once more that war expenditure has been rising more rapidly in the United Kingdom and in the United States than in the other two countries, so that figures covering a twelve-month period are less useful for the former than for the latter countries. Thus in the United States, where the trend of national income can be judged from monthly data on income payments, national defence (including lend-lease) expenditure in May 1941 was equal to 12% of the national income, as compared with the 7% shown in the table for the twelve months from April 1940 to March 1941.

#### TAXATION

Recent trends in taxation are illustrated in Table 4, showing the main groups of tax revenue in ten representative countries for the last three fiscal years.

In practically all countries, the taxes which have furnished the largest additional revenue since 1939 are the various income taxes on individuals and corporations, defence taxes based on income, and excess profits taxes. Income tax receipts are much influenced, though usually with a lag, by variations in economic activity and prices. Thus the figures for 1938/39 were in most cases influenced by the business recession of 1937/38. In several countries, including the United Kingdom, France, the Netherlands and Japan, collection at source has recently been extended to wages and salaries, and the lag in assessment and collection has, in consequence, been considerably reduced.

The burden of income taxation has been increased by changes in the scale of rates, by reductions in personal allowances and exemption limits, and by the creation of new and more or less separate taxes. In the United Kingdom, the standard rate of income tax has been raised by successive stages to 10/- in the pound, as compared with

<sup>1</sup> It is possible that the table understates the Japanese war effort. Armament production in Japan has been financed to some extent by "private" capital issues. Thus the amount of non-Government bonds outstanding increased by 2,215 million yen (equal to about \$500 million) during 1940. But even if the whole of this sum were added to the amount shown as war expenditure, the position would not be essentially different.

Table 4—Government Tax Revenue

(In millions of national currency units. Figures in italics represent budgetary estimates)

Country	1938/39	1939/40	1940/41	1941/4
<b>UNITED KINGDOM: (£)</b>	Fiscal years: April to March			
Income Tax and Surtax .....	398	460	600	836
National Defence Contribution .....	22	27	24	} 210
Excess Profits Tax .....	—	—	72	
Estate Duties .....	77	78	81	82
Stamp Duties .....	21	17	14	14
Motor Vehicle Duties .....	36	34	38	39
Excise .....	114	138	224	267
Customs .....	226	262	305	311
Miscellaneous .....	2	1	1	1
Total .....	896	1017	1359	1759
<b>AUSTRALIA: (£A)</b>	Fiscal years: July to June			
Income Tax .....	12	16	39	...
Land Tax .....	2	2	4	...
Estate Duty .....	2	2	2	...
Sales Tax .....	9	12	19	...
Excise .....	16	19	} 53	...
Customs .....	31	35		...
Miscellaneous .....	2	4	4	...
Total .....	74	90	126	...
<b>CANADA: (C\$)</b>	Fiscal years: April to March			
Income tax on Individuals and Corporations .....	132	123	207	390
Tax on Dividends and Interest .....	10	11	13	43
National Defence Tax .....	—	—	28	110
Excess Profits Tax .....	—	—	24	180
Succession Duties .....	—	—	—	10
Sales Tax .....	122	137	181	204
Excise .....	75	88	129	209
Customs and Other Taxes on Imports .....	95	106	194	219
Total .....	434	465	776	1364
<b>NEW ZEALAND: (£NZ)</b>	Fiscal years: April to March			
Consolid. and War Exp. Accounts: ..	9	12	18	18
Income Tax .....	—	—	6	10
National Security Tax .....	1	1	1	1
Land Tax .....	3	4	5	5
Stamp and Death Duties .....	3	3	2	2
Highway Taxes .....	4	4	6	5
Sales Tax .....	12	11	12	11
Customs and Excise .....	32	35	51	52
<b>UNION OF SOUTH AFRICA: (£SA)</b>	Fiscal years: April to March			
Income Tax .....	17	18	26	26
Mines Contribution .....	—	—	5	5
Excess Profits Duty .....	—	—	2	3
Stamp and Death Duties .....	3	3	2	2
Excise .....	3	3	4	5
Customs .....	9	9	10	10
Miscellaneous .....	1	1	1	1
Total .....	33	34	50	52

*Table 4—Government Tax Revenue (continued)*

(In millions of national currency units. Figures in italics represent budgetary estimates)

Country	1938/39	1939/40	1940/41	1941/42
<b>GERMANY: (RM)</b>	Fiscal years: April to March			
Income tax.....	5352	8200	10600	...
Corporation Tax.....	2408	3214	3476	...
Misc., Property and Transactions .....	1937	2200	2200	...
Turnover Tax.....	3357	3733	3929	...
Consumption Duties.....	2819	} 6100	7000	...
Customs.....	1818			
Total.....	17691	23447	27205	30000
<b>JAPAN: (Yen)</b>	Fiscal years: April to March			
Income Tax.....	733	889	1200	...
Emergency Profits Tax.....	186	371	557	...
Other Income, Property and Transactions.....	298	349	193	...
Excise and Misc. Duties.....	493	482	1038	...
Customs Duties.....	166	148	159	...
Total.....	1876	2239	3147	3691
<b>UNITED STATES: (\$)</b>	Fiscal years: July to June			
Income Taxes.....	2189	2125	3470	4510
Social Security Taxes.....	740	838	925	961
Other Internal Taxes.....	2232	2345	2973	3029
Customs.....	319	348	392	295
Total.....	5480	5656	7760	8795
<b>SWEDEN: (Kr.)</b>	Fiscal years: July to June			
Income and Property Tax.....	362	355	455	477
Defence Tax.....	—	160	265	275
War Profits Tax.....	—	—	20	50
Stamp & Death Duties.....	69	64	55	55
Motor Vehicle Duties.....	131	127	20	18
Turnover Tax.....	—	—	80	200
Duties on Spirits, Wines, Tobacco .....	268	350	392	380
Duties on Gasoline.....	33	36	40	40
Customs.....	207	208	125	130
Total.....	1070	1300	1452	1625
<b>ARGENTINE: (Peso)</b>	Fiscal years: January to December			
Income Tax.....	134	139	145	...
Land Tax.....	43	48	47	...
Stamp Duties.....	64	64	64	...
Sales Tax.....	41	44	45	...
Excise (Unified Taxes).....	238	252	248	...
Customs.....	377	321	276	...
Miscellaneous.....	36	42	37	...
Total.....	933	910	862	...

5/6d. A lowering of the exemption limit in April 1941 to £100 brought two million more persons under the income tax. The reductions in personal and earned income allowances made under the 1941/42 budget, estimated to bring in £125 million a year, were part

of a plan of compulsory savings. It was provided that the additional amount of tax paid on account of these reductions will be refunded to the taxpayer after the war.

In the British Dominions, the yield of the income tax has also been increased through revisions of rates and allowances. In addition, Canada has introduced a National Defence Tax with a lower exemption limit (\$600 a year) but at milder rates (5-7%) than the income tax (which, with a basic rate of 15%, starts at \$750 a year); and New Zealand has adopted a National Security Tax of 1/- in the pound with no personal or family exemption, but with provision for increased family benefits under the Social Security Act.

In the United States, personal exemptions for Federal Income Tax were lowered in 1940 by one-fifth, and a defence tax equal to 10% of the income tax was imposed on incomes earned in 1940.

In Germany, the only important change was the 50% increase made in September 1939 in the scale of rates for incomes over 2,400 marks a year.

In Sweden, the increase in income taxation was effected through a separate tax, the Defence Tax. The Swiss Federal Government was authorized to levy a special Defence Tax on incomes, which was largely a continuation of the pre-existing Emergency Tax. In France, a special 15% tax was imposed in the autumn of 1939 on incomes of men not serving under the colours.

Italy, on entering the war, increased the income tax rates by from 25 to 100%, and introduced a special tax of 2% on salaries and wages up to 720 lire per month. The income tax was further raised at the end of 1940.

In the Netherlands, during the second half of 1940, the dividends tax was replaced by a tax on all (not only distributed) corporate profits, and various changes were made in the income tax, rendering the scale more progressive and revising the basic allowances.

In Japan, a general reform of taxation was carried out in 1940. Taxation of individual incomes was recast into six "classified taxes" related to the various sources of income and a "composite tax" on total income, and a corporation tax was introduced, based on profits and capital.

In the Argentine and Peru, action was taken in 1941 to offset the decline in Customs revenue through increased taxation of income.

Apart from the Japanese and Netherlands corporation taxes just mentioned, excess profits taxes, affecting usually corporate and individual enterprises alike, have been introduced in a number of countries, including the United Kingdom, the British Dominions, India, the United States, Italy and Sweden. Normal or standard profits have been determined on the basis of average earnings in previous



years or, as in the case of the United States and Italy, on the basis of the ratio of profits to capital, at the option of the taxpayer. In the United Kingdom, there are two alternative taxes : the National Defence Contribution adopted in 1937 and the war-time Excess Profits Duty. In some cases, as in Canada, the amount of tax paid must not fall below a certain percentage of total profits. The rate of tax is generally high, amounting in Sweden, for instance, to 80% and in Canada to 75% of excess profits. In the United Kingdom, the rate was fixed at 100%. It was observed, however, that this left no inducement to the entrepreneur to effect economies or to resist cost increases. In April 1941, therefore, one-fifth of the tax was made refundable after the war.

As may be seen from Table 4, excess profits and similar taxes have in most cases accounted for a relatively small share of total tax revenue. Profits have generally been checked by various direct controls, in particular by the control of prices.

Property taxes in some cases, as in the Netherlands and the Scandinavian countries, are linked to the income tax, and have been automatically increased with the latter. In Switzerland, an emergency tax on property was adopted to meet part of the cost of mobilization. In Italy, a general property tax was introduced in the spring of 1940 as a permanent feature of the fiscal system at a rate of  $\frac{1}{2}\%$  and with an exemption limit of 10,000 lire. In Finland, a capital levy or emergency property tax was voted in 1940 to compensate refugees from the territories ceded to the U.S.S.R. The tax was levied at rates varying from  $2\frac{1}{2}\%$  on property values exceeding 4,000 marks (or about \$80) to 20% on properties exceeding 4,000,000 marks.

The decline in the yield of stamp duties which, as shown in Table 4, has taken place in the United Kingdom, Sweden and the Union of South Africa, has been due largely to the fall in the volume of Stock Exchange transactions.

Under the name of sales, turnover or purchase taxes, general taxes on commodity transactions have been extensively used in recent years. Such taxes have been introduced in the United Kingdom, Sweden, Switzerland, Denmark and Finland. In countries where they existed before, as in Norway, Canada, Australia and New Zealand, rates have been increased. As in the case of excise duties on specific commodities, the purpose of these taxes has frequently been to check civilian demand and to liberate resources for war production. The more they have achieved in this respect, the less has naturally been their yield; direct curtailment of demand through rationing and other means has further tended to limit the yield of these taxes.

Nevertheless, sales taxes and excise duties have in many countries made substantial contributions to the increase in total revenue as may

be seen from Table 4. In Canada, for instance, their yield rose from \$197 million in 1938/39 to \$310 million in 1940/41. In the United Kingdom, excise receipts increased from £114 million in 1938/39 to £224 million in 1940/41. The latter figure includes the yield of the purchase tax introduced in October 1940. This tax is more onerous than similar taxes elsewhere, but it does not cover necessities. It affects chiefly manufactured consumers' goods, and discriminates sharply between luxuries and articles of current use, the former being taxed at 24% and the latter at 12%. In the British Dominions new sales or excise duties have been imposed on various goods and services such as motor cars, tyres, travel tickets, entertainments, cosmetics, betting, etc.—the main object being frequently to check demand. In Germany, special "war supplements" were added to the consumption duties in September 1939, and these supplements alone yielded 1,600 million marks in 1940/41, or about 5% of total tax revenue.

Customs revenue has shown very different tendencies in different countries, depending on import values and on the nature of the tariff. The rise of Customs receipts in the United Kingdom, for instance, has been due to the high level of imports, coupled with the fact that the British import duties are mostly *ad valorem*. Of the countries included in Table 4, the Argentine, Japan and Sweden show a decline in Customs revenue. In Sweden, Switzerland, France and other countries, certain duties have been reduced in order to counteract the rise in prices or to encourage the building up of stocks of imported commodities.

In conclusion, a marked tendency towards centralization may be noted, affecting the division of fiscal powers between national and local governments. In Japan, after the fiscal reform of 1940, local authorities were no longer permitted to impose surtaxes on the basis of the national taxes; local taxes were collected by the central Government, and a share of the revenue of the central Government was distributed to the local authorities under a system of grants. A similar arrangement was made in the Netherlands in the latter part of 1940. In France, the business license tax collected on behalf of the communes and departments was abolished early in 1940, the local authorities being granted a share in the proceeds of a new turnover tax.

In Canada, the report of the Sirois-Rowell Committee concerning the apportionment of certain taxes and expenditures between the Dominion and the provincial governments was discussed at a conference in January, 1941, but was not unanimously approved by the provincial governments. The Dominion, however, making use of its constitutional powers, adopted in its budget for 1941/42 provisions

similar to those recommended in the report: the Dominion Income Tax was increased and a Dominion Succession or Estate Duty was introduced; the provinces were requested not to collect income tax, and were offered a grant equivalent to their previous revenue from that source.

### GOVERNMENT BORROWING

The increase in the burden of taxation has nowhere been sufficient to meet national defence or war requirements. Government borrowing has taken place on a vastly increased scale. Some countries indeed have come to rely predominantly on borrowing. In the United Kingdom, Germany and Japan, as was shown in Table 1 above, the increase in the public debt in 1941/42 was considerably greater than the yield of taxation, in the United Kingdom nearly twice, in Japan more than twice as great. Quarterly figures showing the growing importance of borrowing in certain countries were given in Table 2 in this chapter. A further table to illustrate the course of Government borrowing is given below (Table 5) showing the internal public debt of ten countries in the early part of 1939 and the changes which took place in it in the two succeeding fiscal years (1939/40 and 1940/41).<sup>1</sup>

War-time borrowing started in the different countries at widely different levels. The relative size of the public debt may be roughly gauged by comparing it with the national income.<sup>2</sup> In the United Kingdom, internal Government debt outstanding on March 31, 1939 exceeded the yearly national income by over 50%. In Germany, on the other hand, the debt was equal to less than half of the national income, even if allowance is made for the secret debt estimated at approximately 13,000 million marks. In Sweden, internal debt outstanding was equal to about a quarter of the annual national income. The proportionate increase in the public debt has been particularly high in countries where its pre-war size was relatively low. In Sweden the national debt practically doubled between June 1939 and June 1941. In Germany, the disclosed internal debt in March 1941 was as much as three times larger than two years before. In the United Kingdom, on the other hand, the percentage rise during the two years was less than 50%.

The table shows roughly how the increase in debt has been divided between long and short-term borrowing. In Sweden and the United States, the increase in 1940/41, in contrast to the preceding year,

<sup>1</sup> The table is confined to internal debt. Recent changes in foreign debt have been insignificant, except for certain parts of the British Commonwealth (Canada, South Africa, India) which have redeemed part of their sterling debt held in the United Kingdom. (See Chapter V.)

<sup>2</sup> For estimates of national income, see Table 1.

Table 5—Changes in Internal Public Debt

A: Total internal debt; B: Long- and medium-term debt; C: Short-term debt.

(In millions of national currency units)

Country	Outstanding Debt at Start of Fiscal Year 1939/40 or 1939	Increase During Fiscal Year 1939/40 or 1939	Increase During Fiscal Year 1940/41 or 1940
<b>UNITED KINGDOM (£)</b>	(31.III.1939)	(1.IV.39-31.III.40)	(1.IV.40-31.III.41)
A.....	7247	+ 652	+2489
B.....	6327	+ 83	+1165
C.....	920	+ 569	+1324
<b>AUSTRALIA (£A)<sup>1</sup></b>	(30.VI.39)	(1.VII.39-30.VI.40)	(1.VII.40-30.VI.41)
A.....	704	+ 47	+ 74
B.....	643	+ 46	+ 61
C.....	61	+ 1	+ 13
<b>CANADA (C \$)<sup>2</sup></b>	(31.III.1939)	(1.IV.39-31.III.40)	(1.IV.40-31.III.41)
A.....	2832	+ 403	+ 863
B.....	2512	.	.
C.....	320	.	.
<b>NEW ZEALAND (£ NZ)</b>	(31.III.39)	(1.IV.39-31.III.40)	(1.IV.40-31.III.41)
A.....	146	+ 18	+ 26
B.....	130	+ 9	+ 20
C.....	17	+ 9	+ 6
<b>SOUTH AFRICA (£ SA)<sup>3</sup></b>	(31.III.39)	(1.IV.39-31.III.40)	(1.IV.40-31.III.41)
A.....	179	+ 8	+ 53
B.....	160	+ 8	+ 36
C.....	18	= 0	+ 17
<b>BELGIUM (B.Fr.)</b>	(31.XII.1938)	(1.I.39-31.XII.39)	(1.I.40-31.XII.40)
A.....	37642	+ 2676	+12178
B.....	35591	+ 297	+ 882
C.....	2051	+ 2379	+11296
<b>GERMANY (RM)</b>	(31.III.1939)	(1.IV.39-31.III.40)	(1.IV.40-31.III.41)
A.....	29589	+21240	+37709
B.....	22945	+ 5723	+17889
C.....	6644	+15517	+19820
<b>JAPAN (Yen)<sup>4</sup></b>	(31.III.1939)	(1.IV.39-31.III.40)	(1.IV.40-31.III.41)
A.....	16577	...	...
B.....	16065	+ 5563	+ 5380
C.....	485	+ 110	+ 57
<b>UNITED STATES (\$)</b>	(30.VI.1939)	(1.VII.39-30.VI.40)	(1.VII.40-30.VI.41)
A.....	40445	+ 2528	+ 5994
B.....	28072	+ 1357	+ 6394
C.....	12373	+ 1171	- 400
<b>SWEDEN (Kr.)</b>	(30.VI.1939)	(1.VII.39-30.VI.40)	(1.VII.40-30.VI.41)
A.....	2634	+ 991	+ 1545
B.....	2483	+ 423	+ 1206
C.....	151	+ 568	+ 339

<sup>1</sup> *Australia*: External debt (£A 591 million on June 30th, 1939) fell by 1 million in 1939/40 and rose by 11 million in 1940/41. The figures shown in the table include the debt of the States, which is managed by the Commonwealth.

<sup>2</sup> *Canada*: External debt (C. \$806 million on March 31st, 1939) declined by C. \$82 million in 1939/40 and by C. \$85 million in 1940/41. The increase in internal debt in 1940/41 includes C. \$325 million of Government securities sold to the Bank of Canada, the proceeds of which were credited to the Foreign Exchange Control Board for the acquisition of gold and foreign exchange from the Bank and from private holdings.

<sup>3</sup> *South Africa*: External public debt (SA £101 million on 31. III. 1939) rose by 5 million in 1939/40 and declined by 8 million in 1940/41.

<sup>4</sup> C represents Rice Bills and Silk Notes.

took place predominantly through long-term borrowing. In Belgium and Canada, borrowing has been predominantly short term. The same is true of the United Kingdom and Germany, though the proportion of long-term borrowing showed a marked increase in these countries from 1939/40 to 1940/41. The increase in the British floating debt was taken up in approximately equal parts by three sources, two of which represented external finance. First, the British Exchange Equalization Account took up large amounts of Treasury bills, issued to it directly through the "tap" as and when it gave up its gold and foreign exchange for the financing of British Government purchases abroad. Secondly, large amounts of Treasury bills, issued through the weekly public tender, were taken up by sterling area central banks.<sup>1</sup> A third substantial part of the additional floating debt was in the form of Treasury Deposit Receipts taken up by the London Clearing Banks, as is shown later in this chapter.

In Japan, Government borrowing has been almost entirely in bonds; and these bonds have had to be absorbed almost entirely by the banks, with the result of a large expansion of credit. It is indeed almost generally true that the distinction between long and short-term borrowing has not corresponded to any sharp distinction in the sources of borrowing.

In order to prevent an undue expansion in the quantity of money, many Governments have made special efforts to borrow from the public rather than from banks. In some cases, popular savings campaigns have been launched to promote the habit of thrift, and new types of securities have been issued, designed to make a strong appeal to the public at large and more especially to the lower income groups. The first country to take such measures was the United Kingdom, where national savings certificates and defence bonds were placed on sale continuously from November 1939, the former being issued at 15/- repayable in ten years at 20/6d, the latter carrying interest at 3% a year, issued in units of £5, repayable in seven years. Similar schemes were started in a number of other countries, for example, in Sweden in January 1940, in Australia in February, in Canada in March 1940 and in the United States in April 1941.

In Japan savings certificates of small denominations were introduced in August 1938, and a vigorous thrift campaign has been in progress since then, amounting in practice to a system of compulsory saving. Early in 1941, this campaign was further intensified and the Government decided that national savings in the fiscal year 1941/42 must reach 13,500 million yen, or about half of the national income.

<sup>1</sup> Cf. Chapter V.

As already mentioned, the United Kingdom introduced a scheme of compulsory saving in April 1941 under which certain income tax payments amounting to £125 million a year were made refundable after the war.

A compulsory loan of £ (NZ) 8 million was issued in New Zealand in October 1940, carrying no interest in the first three years and  $2\frac{1}{2}\%$  in the remaining ten years of its currency. Subscriptions to this loan had to equal the amount by which a person's income tax in 1939 exceeded the sum of £ (NZ) 50.

Apart from such direct methods of compulsory saving, an indirect compulsion to save has become increasingly important. In a large number of countries, as was shown in the preceding chapter, rationing has been more and more extended, and the production and sale of many goods has been stopped altogether. In consequence, a part of people's incomes has tended to become virtually unspendable; people have come to save more, simply because there has been a lack of suitable alternative objects of expenditure. In this way, there has developed an indirect but nevertheless effective compulsion to save, which has naturally simplified the problem of Government borrowing.

This indirect form of compulsory saving has become important even in the United Kingdom.<sup>1</sup> But it is in Germany that it has been most thoroughly developed, owing to the general shortage of commodities and the drastic restriction of consumption by quantitative rationing and other similar methods. According to private estimates published in a German periodical<sup>2</sup> about 14,000 million marks were "saved" in 1940 as a result of the restriction of consumption. Of this total some 4,500 to 5,000 million was "saved" on food, and approximately 9,000 million was ascribed to reduced consumption of industrial products, of which textiles accounted for roughly one-half.

It is a secondary though ultimately not unimportant question whether the public hoards in the form of bank notes or deposits what it is thus compelled to save, or whether it invests these savings in Government securities. In the former case the new securities issued by the Government are held by the banks, in the latter they are held directly by the public. The German public has shown a marked preference for bank deposits, as against direct investment in Government paper. In the course of 1940, deposits with German commercial

<sup>1</sup> In his Budget speech of April 7, 1941 the Chancellor of the Exchequer stated: "I am sure that a further increase is within the powers of the savings campaign . . . The Minister of Food and the President of the Board of Trade have removed and are removing many temptations in our way, and keeping us on the straight and narrow path." (*The Times*, April 8, 1941.) An important extension of rationing subsequent to this speech was the clothing rationing scheme introduced by the Board of Trade (See Chapter III above).

<sup>2</sup> Cf. *Der deutsche Volkswirt*, December 20th, 1940.

banks increased by approximately 50% (so far as can be judged from the annual reports of certain big banks) while savings bank deposits rose 30% and currency in circulation 20%. As will be seen in the next section, Government borrowing has practically everywhere been taken up to some extent by the banks, and has increased the quantity of money; and the public has sometimes been willing to hold more money and to become more "liquid" even in countries where consumers' spending has been comparatively unrestricted.

The compulsory saving resulting from rationing of consumption has not been the only source of Government finance in countries such as Germany. The commodity shortage shows itself similarly in the case of producers' goods, at any rate in the civilian sector of trade and production. Stocks are sold out and cannot be replaced. Industrial depreciation funds cannot be re-invested in the renewal of equipment because new equipment is seldom obtainable except for purposes essential for the war. Capital is set free in its monetary form; and as the money cannot be used for anything else, it becomes automatically available to the Government either directly by being invested in Government securities, or indirectly through the banks. This process, of course, represents consumption of capital. The amount released in Germany in 1940 through this liquidation of stocks and accumulation of unusable amortization funds has been estimated at 12,000 million marks.<sup>1</sup>

In the United Kingdom, according to an official estimate,<sup>2</sup> capital consumption ("net disinvestment") during 1940 amounted to approximately £950 million; as compared with a net investment of £210 million in 1938. But it seems that only a small part of this disinvestment was due to the attrition of physical capital in the form of civilian commodity stocks and equipment. Most of the £950 million represented "external" disinvestment through the sale of gold and foreign assets or the increase in overseas liabilities, which has been estimated at £1,020 million for the 18 months from September 1939 to February 1941. It is only from the point of view of an individual country that sales of foreign assets constitute capital consumption. Such sales clearly need not involve a loss or attrition of physical capital anywhere, and represent simply a method of paying for the goods and services contributed by other countries to the nation's war effort.

A considerable proportion of Government borrowing in the United Kingdom has thus been covered by the liquidation of foreign assets and (to a relatively minor extent) by an increase in overseas liabili-

<sup>1</sup> Cf. *Der deutsche Volkswirt*, December 20th, 1940.

<sup>2</sup> "An Analysis of the Sources of War Finance and Estimate of the National Income and Expenditure in 1938 and 1940." *Cmd.* 6261, 1941.

ties. This part of British Government borrowing has obviously had no effect on the volume of money. As explained before, the increase in the British floating debt has been taken up very largely by the Exchange Equalization Account and by sterling area central banks. Similarly, a part of the increase in the long-term internal debt has been taken up by private investors and financial institutions, who have had to surrender their foreign securities to the authorities and who, in the absence of other investment outlets, have had to re-invest the cash received in compensation therefor in the war loans issued by the Government. There has been in effect an exchange of foreign securities for new domestic Government bonds. To that extent the increase in the national debt has been covered by goods and services received from overseas and has involved no strain on the monetary position in the United Kingdom.

### MONEY, PRICES AND INTEREST RATES

A great increase in the volume of money has taken place almost everywhere since the outbreak of the war. Diagram 2 is intended to illustrate this world-wide expansion of currency and credit. The diagram covers 34 countries and shows, wherever possible, three series for each country: notes in circulation, sight deposits with commercial banks and total commercial bank deposits, all expressed as a percentage of July 1939.

There exists no single or simple measure of monetary expansion. The composition of the monetary supply differs from country to country and fluctuates continually in each country. While in countries such as the United Kingdom, Canada and the United States the medium of payment consists predominantly of bank deposits, there is still a large number of countries where currency notes play an important if not a preponderant rôle in the monetary system. Shifts in the relative position of bank notes, sight and other deposits can easily be observed from the diagram; they will be referred to later. For the moment, let us note the general trend of the changes that have occurred since July 1939.

The expansion has been unequal. In four of the countries shown in the diagram, the notes outstanding in the early part of 1941 exceeded the level of July 1939 by 10% or even less; and these are all primary producing countries outside Europe: namely, the Argentine, Brazil, Colombia and the Netherlands Indies.

On the other hand, there were fifteen countries where the note circulation in the first few months of 1941 was over 50% higher than in July 1939: namely, Germany, Belgium, the Netherlands, France, Denmark, Hungary, Roumania, Bulgaria, Yugoslavia,



Greece, Finland, Turkey, Egypt, Canada, Japan. It will be seen that they include Germany and the countries conquered or occupied by German troops. In the case of Norway, the data concerning the note issue have been suppressed since the invasion; but the publication of commercial bank returns has been resumed, and from these it appears that aggregate bank deposits have increased by over 50%.

The principal methods by which Germany has inflated the currencies of countries under her control are reviewed in the last section of the next chapter.<sup>1</sup> Briefly, they fall under three heads: (1) issues of *Reichskreditkassenscheine* in the occupied territories, that is, of German notes which the banks in these countries were compelled to take up in exchange for national currency; (2) charges imposed nominally for the costs of occupation, which the local central banks were compelled to finance in whole or in part; (3) purchases on clearing account, giving rise to large uncleared reichsmark balances which, again, the local central banks were compelled to take up in whole or in part.

As the diagram shows, monetary expansion in European countries has been reflected in bank deposits as well as in the note circulation. Sweden and Yugoslavia were the only countries where, during the period under review, deposits failed to increase, and where the growth of the money supply was wholly in the form of notes.

In the countries belonging to the sterling group—including Australia, New Zealand, India, South Africa, Ireland—the rise in note circulation and deposits, ranging generally from 10 to 50% between July 1939 and the first part of 1941, has been due partly to the defence and armament expenditures of these countries themselves and partly to the purchases made by the United Kingdom. As a result of these purchases, the exchange reserves of the sterling-area central banks have increased,<sup>2</sup> and this has tended to widen the domestic credit base.

In the United Kingdom and the United States the degree of monetary expansion as measured by the increase in aggregate bank deposits and notes in circulation has been surprisingly similar, ranging between 20 and 30%, being somewhat less marked in the United Kingdom than in the United States.

In China—a country which, owing to the absence of monthly data, is not represented in the diagram—currency expansion appears to have taken place on such a scale as to create a serious inflation. The Chinese National Government has had to meet its financial requirements for the war against Japan largely by borrowing from its own note-issuing institutions. The note circulation of the four Chinese

<sup>1</sup> Chapter V.

<sup>2</sup> See Chapter V.

Diagram 2

Note Circulation and Commercial Bank Deposits

A. Note Circulation; B. Sight Deposits; C. Total Deposits.

July 1939 = 100

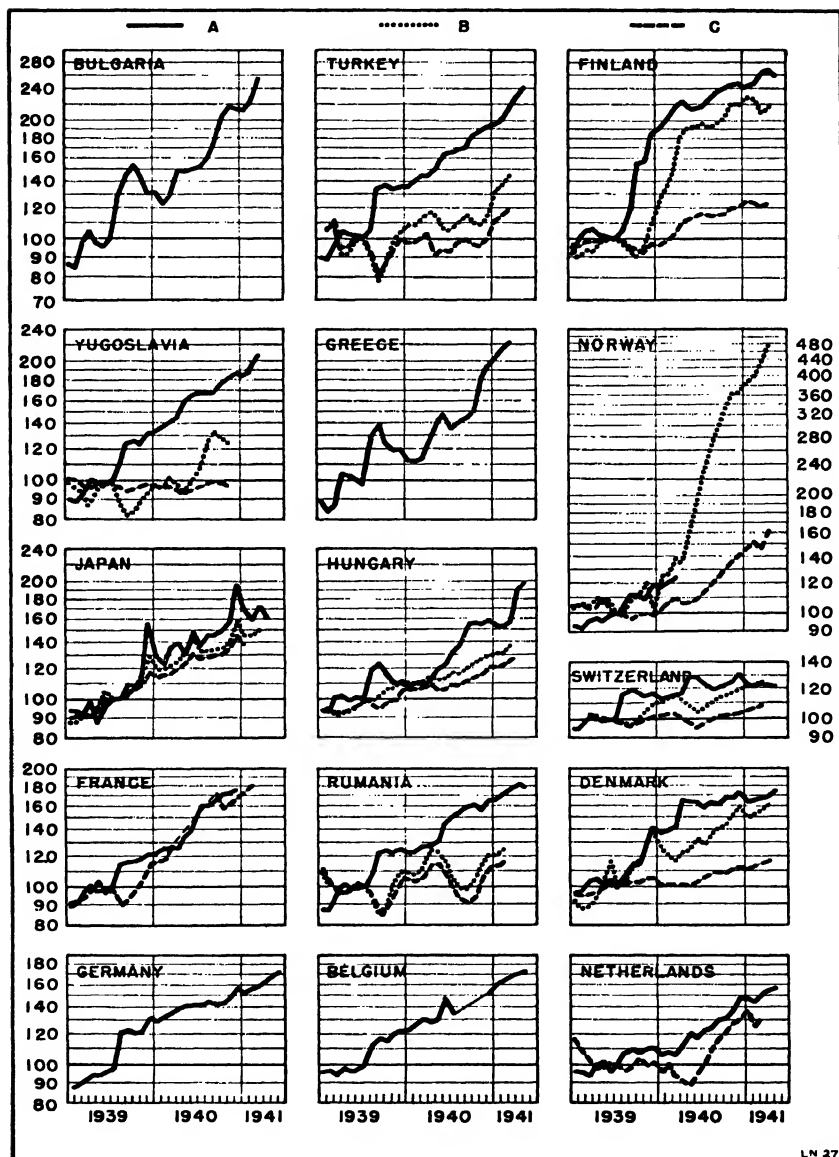
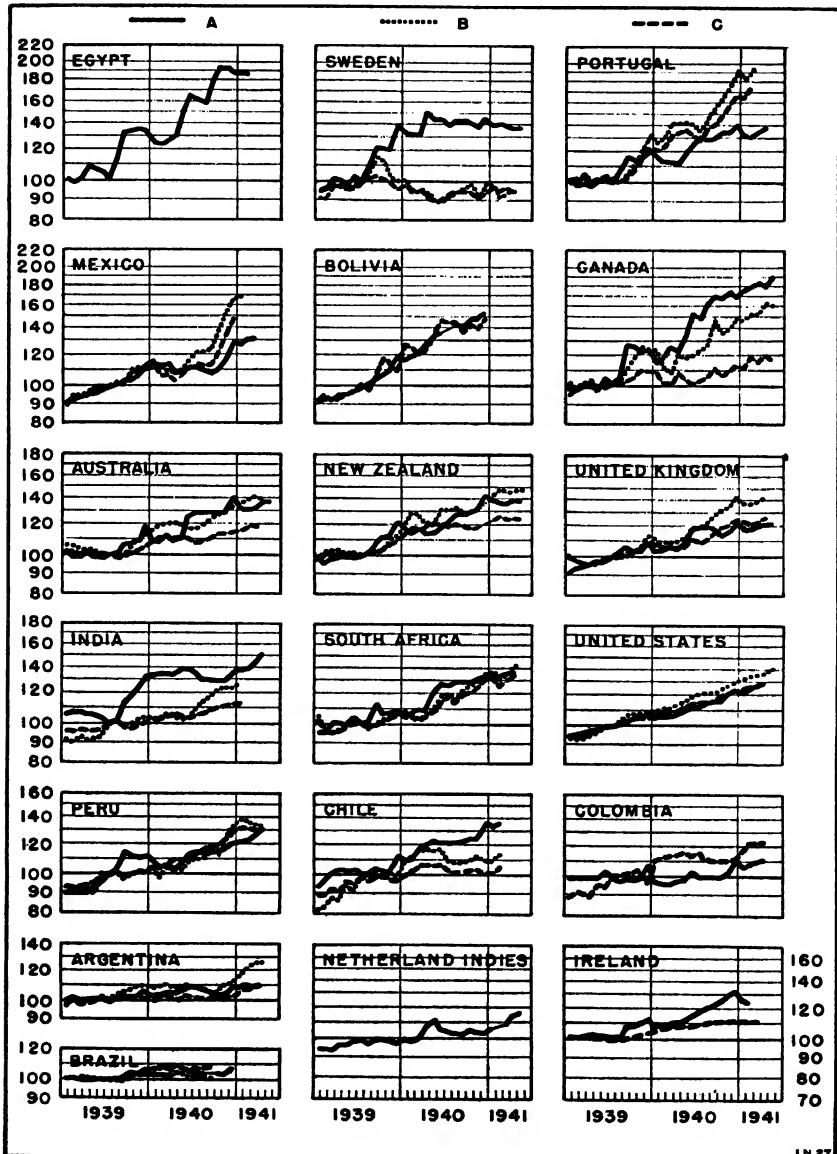


Diagram 2 (continued).

Note Circulation and Commercial Bank Deposits

A. Note Circulation; B. Sight Deposits; C. Total Deposits.

July 1939 = 100



Government banks, amounting to 1,408 million yuan in June 1937 and to 1,727 million in June 1938, rose to 2,627 million yuan in June 1939 and to 3,962 million in June 1940. In the two years to June 1940 there was thus an increase of 130%.

In all except a few countries the expansion in note circulation has been greater than in bank deposits. This is easily seen from Diagram 2: in the great majority of cases line A stands above C. The most notable exceptions are Brazil, Colombia, Peru and Portugal—countries situated outside the war zone—where certain special factors, to be mentioned presently, tending to raise the demand for currency, have naturally played a less important rôle.

The shift from bank deposits to currency was temporarily accentuated in the autumn of 1939 and the early summer of 1940, when the public showed a tendency, especially in Europe, to withdraw money from the banks and to hold more currency. This was largely due to the general feeling of insecurity engendered by the events and to a desire to be prepared for emergencies. But over the whole period up to the first half of 1941 there were undoubtedly other and more deep-seated forces at work to change the proportion of notes to deposits. The mobilization of men for the services and the evacuation of civilians, for example, must have increased the demand for currency, the actual or anticipated separation of families tending to increase the number of separate cash holdings and the aggregate of cash required. In some countries the transition to war economy increased the proportion of wages in the national income. In the United Kingdom, for example, the share of wages<sup>1</sup> rose from 41% in 1938 to 45% in the last quarter of 1940. As wages are mostly paid in cash, this undoubtedly contributed to the shift from bank deposits to currency. In some countries, moreover, part of the expansion in note issues has been due to the desire of commercial banks to strengthen the reserves of till money especially in their local branch establishments, so as to guard against a possible interruption of communications.<sup>2</sup>

Some Governments have attempted to discourage the holding of notes on the part of the public in order to restrain the increase in the note circulation. In Germany, by a decree of September 4th, 1939, currency hoarding—though not precisely defined—was made a punishable offence. In Switzerland, Norway and elsewhere, the authorities have issued appeals to the public to refrain from hoarding. In France, a decree was published in November 1940 prohibiting the use of bank notes for payments of more than 3,000 francs (about \$68 at the official exchange rate). People were urged to open bank

<sup>1</sup> Including payments to armed forces and earnings of shop assistants.

<sup>2</sup> See *Monetary Review* (1940), Chapter II.

accounts and to make payments by cheque, in order to arrest the progress of inflation. It was apparently believed that expansion in bank deposits and cheque payments would somehow be less inflationary than expansion in the note issue. The measure, it may be observed incidentally, did not really affect hoarding at all, since by definition hoarded currency is not used for payments.

In addition to the shift from deposits to notes, there has been a marked shift, within the total of commercial bank deposits, from time deposits and savings accounts to deposits payable on demand. This has been due in varying degrees to the desire of the public for increased liquidity, to the low or declining rates of interest paid on time deposits, or to an increase in monetary turnover.

In France, Belgium, the Netherlands, Bolivia and Colombia, total deposits as plotted in Diagram 2 consist predominantly of sight deposits, so that in these cases line C of the diagram really reflects the movement of sight deposits also. Of the 23 countries for which the diagram shows a separate series for sight deposits, there is only one (Brazil) where sight deposits have increased less than total deposits. In the other 22 countries the proportion of sight to total deposits has increased. This increase has been particularly marked in Norway, namely from 20% in March 1940 to 44% in March 1941.

It is hardly necessary to examine in detail the central bank assets that have formed the counterpart to the expanding note issues. In certain "sterling group" countries, these assets have consisted partly of sterling deposits and other short-term investments in London. In the United States, the increase in the assets of the Federal Reserve Banks has been wholly in gold certificates, holdings of Government securities having been reduced from \$2,563 million in June 1939 to \$2,184 million in June 1941. In most other countries the expansion in the note circulation and other sight liabilities of central banks has come about largely through the acquisition of Government securities of one kind or another, including direct loans to the State. Figures on central banks' Government portfolios have been given elsewhere and need not be repeated here.<sup>1</sup>

In countries such as the United Kingdom where there exists a well-developed commercial banking system and money market, and where in consequence it is seldom necessary for the State to have direct recourse to the central bank, the acquisition of Government securities by the central bank has been designed mainly to prevent the

<sup>1</sup> A comprehensive special table entitled "Central Banks: Advances to Governments and Government Security Holdings" appeared in the *Monthly Bulletin of Statistics* (League of Nations) in February 1941. See also *Monetary Review* (*Money and Banking* 1939/40, Vol. I), Chapter III: "Government Borrowing and the Money Market."

drain of notes into circulation from reducing the reserve balances of the commercial banks. Elsewhere, Governments have in many cases been greatly dependent on central bank credit, and the growth of Government securities held by central banks in these countries has been a direct reflection of State requirements. In Italy, for example, the Government appears to have borrowed heavily from the bank of issue.<sup>1</sup> Even before Italy's entry into the war, the note circulation was rapidly expanding, rising from 18,956 million lire at the end of 1938 to 24,432 million at the end of 1939, that is, by 29% in the course of a year. Since then, no further figures have been published. In the last section of this chapter, reference is made to the effects of this inflationary finance on the structure of prices in Italy.

The commercial bank assets lying behind the expansion of deposits have also consisted largely of Government securities. This may be seen from Table 6, showing the deposits and principal assets of commercial banks in eight countries.

In the United States, Government obligations held by the reporting member banks rose by 22% from May 1940 to May 1941, and accounted for more than half of the increase in deposits. Cash reserves over that period remained, on balance, practically unchanged; the weekly figures show a rise up to November 1940 and a decline thereafter. This decline was determined mainly by the expansion of money in circulation, combined with a falling off in the rate of gold imports, a reduction in securities and an increase in Treasury deposits with Federal Reserve Banks. The excess reserves of all member banks rose from about \$4,200 million in May 1939 to a record level of \$6,940 million on October 23rd, 1940 after which they declined steadily to \$5,830 million in May and \$5,400 million in June 1941, chiefly as a result of the expansion in deposits, which called for an increase in the legally required reserves.

In the United Kingdom, the issue of Treasury bills, after a rapid expansion in the early months of the war, remained virtually constant after the middle of 1940; and of the available supply, an increasing proportion was taken up by central banks of the sterling area, so that less bills were left to the London money market. Accordingly, in the twelve months to May 1941, the bill portfolio and the money market loans of the London clearing banks declined. But this was more than offset by the so-called Treasury Deposit Receipts, which, from July 1941 onwards, were issued directly to the banks, bearing interest at  $1\frac{1}{8}\%$  repayable in 6 months and rediscountable at the Bank of England. In addition, there was a considerable increase in the clearing banks' "investments," consisting predominantly

<sup>1</sup> Cf. *Frankfurter Zeitung*, January 29th, 1941.

Table 6—Principal Accounts of Commercial Banks

(National currency units, 000,000's)

United States (\$) 1939 1940 1941				United Kingdom (£) 1939 1940 1941			
May:				May:			
Reserve . . . .	8,361	11,032	11,294	Cash . . . . .	236	257	293
Com. loans . .	3,839	4,397	5,621	Call Money .	144	144	128
Sec. loans . . .	1,217	1,049	925	Bills . . . . .	201	409	173
Gov. obl. . . .	10,329	11,460	14,024	Tr. Dep. Rec.	—	—	469
Dem. dep. . . .	16,796	19,971	24,016	Inv. . . . .	605	633	848
Time dep. . . .	4,984	5,119	5,240	Adv. . . . .	992	964	873
				Dep. . . . .	2,167	2,413	2,824

(Reserve with Federal Reserve Banks; Commercial, etc. loans; Loans for purchasing or carrying securities; U.S. Gov. obligations; Demand deposits adjusted; Time deposits.)

(Cash; Money at call and short notice; Bills discounted; Treasury Deposit Receipts; Investments; Advances, etc.; Deposits.)

Canada (C.\$) April:				Australia (£A) April:			
Sec. . . . .	1,203	1,307	1,577	Sec. Tr. bills	48	84	106
Loans . . . . .	1,197	1,331	1,318	Adv. . . . .	290	284	282
Dep. . . . .	2,413	2,505	2,836	Dep. . . . .	323	353	372

(Dominion and Provincial securities; Loans; Deposits.)

(Gov. and Municipal securities and Treasury bills; Advances, discounts, etc.; Deposits.)

Japan (yen) February:				Belgium (francs) March:			
Bonds . . . . .	3,836	4,820	6,279	Bonds, Bills .	7,053	6,857	12,160
Adv. . . . .	8,788	11,249	13,305	Adv. . . . .	7,943	6,145	5,222
Dep. . . . .	15,031	19,290	23,445	Dep. . . . .	15,635	13,355	18,079

(Gov. bonds; Advances; Deposits.)

(Public bonds, and bills, incl. Treasury bills; Advances, etc.; Deposits.)

Denmark (kroner) April:				Norway (kroner) March:			
Sec. . . . .	456	424	689	Bonds . . . . .	218	180	366
Adv. . . . .	1,447	1,551	1,391	Adv. . . . .	1,010	1,187	876
Dep. . . . .	2,249	2,340	2,728	Dep. . . . .	991	1,053	1,502

(Bonds and shares; Advances and discounts; Deposits.)

(Bonds; Advances and discounts; Deposits.)

of British Government securities. In these circumstances the cash base lost much of its former significance: instead of determining the amount of credit available, it came to be adjusted *ex post*—by open-market operations and other central bank action—to the volume of deposits, which was determined to a large extent directly by Government needs.

In the majority of countries, the increase in the Government security holdings of commercial banks has been accompanied by a reduction in commercial discounts and advances. Such has been the case, in the latter part of the period covered by Table 6, in the United Kingdom, Canada, Australia, and particularly also in the three

occupied countries included—Belgium, Denmark and Norway—where credit expansion has been particularly marked. The monthly returns of the German commercial banks are no longer published, but from the annual balance-sheets of the leading Berlin banks it appears that their commercial advances have fallen off considerably. In the United Kingdom, the fall in advances has been attributed to the general diversion of production in favour of armament industries, and to the fact that the trade in essential raw materials, for example, has been taken over largely by Government departments and is financed by Government paper.<sup>1</sup> More generally, as experience has shown even before the war, Government deficit expenditure tends to make business men liquid and supplies them with the means of repaying their bank debts. In particular, as it is frequently impossible to replace the stocks of "civilian" commodities that are being liquidated in many countries (including the occupied territories), working capital is set free in its monetary form and, if it was borrowed, is naturally applied to the repayment of bank loans. On the other hand, in countries such as the Argentine and the United States, where commodity stocks have increased—in the former largely through inability to sell, in the latter largely through the accumulation of inventories in anticipation of rising prices—commercial loans of the banks have shown a considerable expansion. Whether bank loans have increased or declined, there is no doubt that in most countries a larger part of them has come to be devoted to the financing of armament production. In the United States, according to an official survey, weekly reporting member banks in leading cities had \$460 million of defence loans outstanding on April 30th, 1941, and had made commitments for additional defence loans totalling \$630 million.<sup>2</sup> The total commercial, industrial and agricultural loans of these banks at the end of April 1941 amounted to over \$5,500 million. In Japan, also, commercial bank advances have increased; and it may be recalled that under the Capital Control Law of 1938 the granting of loans by the Japanese banks has been closely regulated in the interests of the war industries.

It is too early to gauge the effects of war-time expansion of currency and credit on the movement of prices. In many cases the full effects have not yet become apparent. But a rough comparison between the changes in note circulation and bank deposits on the one hand and wholesale prices and costs of living on the other may be useful at this point. Certain reservations must be kept in mind. At all times, the international comparability of the existing national price indices is limited, owing to differences in scope, composition and method of

<sup>1</sup> Cf. *The Economist*, November 16th, 1940 (Banking Supplement).

<sup>2</sup> Cf. *Federal Reserve Bulletin*, June 1941, page 505.



computation. The difficulties of comparison are further increased in wartime, when price controls of unequal comprehensiveness and severity are enforced by practically all governments, and when, therefore, the degree in which the official indices reflect the real forces of supply and demand may be very different in different countries. The question of price control is taken up in the last section of this chapter.

The connection between the volume of money and the level of prices may be very remote in peacetime, when prices may vary more directly with the rate of investment and the degree of employment. But in wartime, when conditions of scarcity and "full employment" predominate, the connection may be much closer and a comparison therefore more significant.

This comparison between changes in money supplies and price movements is given in Table 7 for twenty countries for which recent data are available.<sup>1</sup> In addition, reference may be made to Diagram 3, showing the monthly movement of wholesale price indices and indices of the cost of living in 34 countries.

The table discloses a great diversity of experience, and permits of little generalization. There are a number of countries—including Canada, Germany, Japan, New Zealand, the Union of South Africa and the United States—where the degree of monetary expansion from July 1939 to the spring of 1941 appears to have been much greater than the rise in price indices. In Germany, of course, price control has been particularly thorough, and the official indices relate to official prices. Similarly, the Japanese index, though it has substantially advanced, is no longer a true reflection of the state of the market. But in the other four countries just mentioned—Canada, New Zealand, South Africa, the United States—price control has been mild in comparison; and the lag of prices relatively to the increase in the monetary supply is to be accounted for partly by the increase in production in these countries and partly by the willingness of the public to hold larger amounts of money inactive.

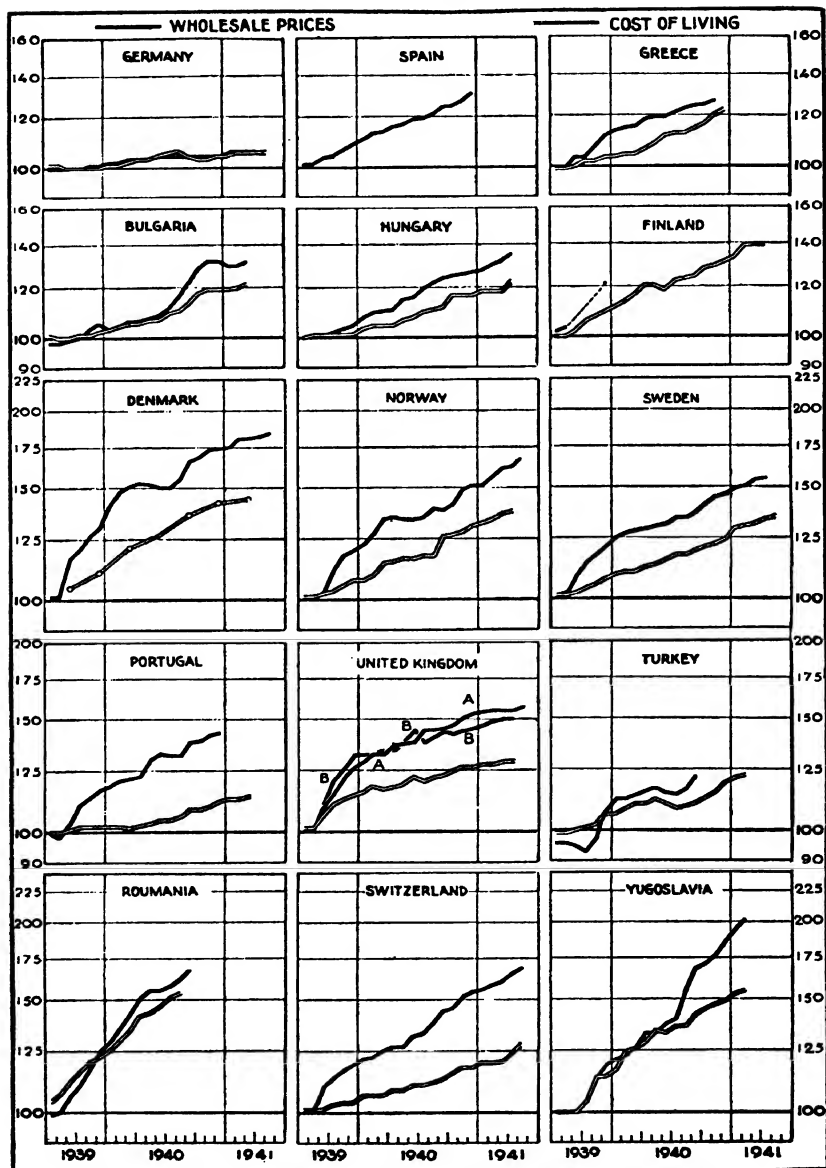
On the other hand, in Switzerland and the United Kingdom the rise in prices from the summer of 1939 to the spring of 1941 was greater than the rise in notes or bank deposits. The greatest increases in wholesale prices<sup>2</sup> during that period occurred in European countries: namely, Yugoslavia (100%), Denmark (81%), Switzerland (71%), Norway (67%), and Sweden (55%), followed closely by

<sup>1</sup> It may be mentioned at once that recent price indices are not available for a number of countries, including France, Belgium, the Netherlands and Italy.

<sup>2</sup> The movement of cost of living indices, comparatively sluggish at all times, tends to become even less representative in wartime, owing to the fact that the items which these indices include (such as rent, light and the most important foodstuffs) tend to be most affected by official price fixing and control.

*Diagram 3*  
*Wholesale Prices and Cost of Living*

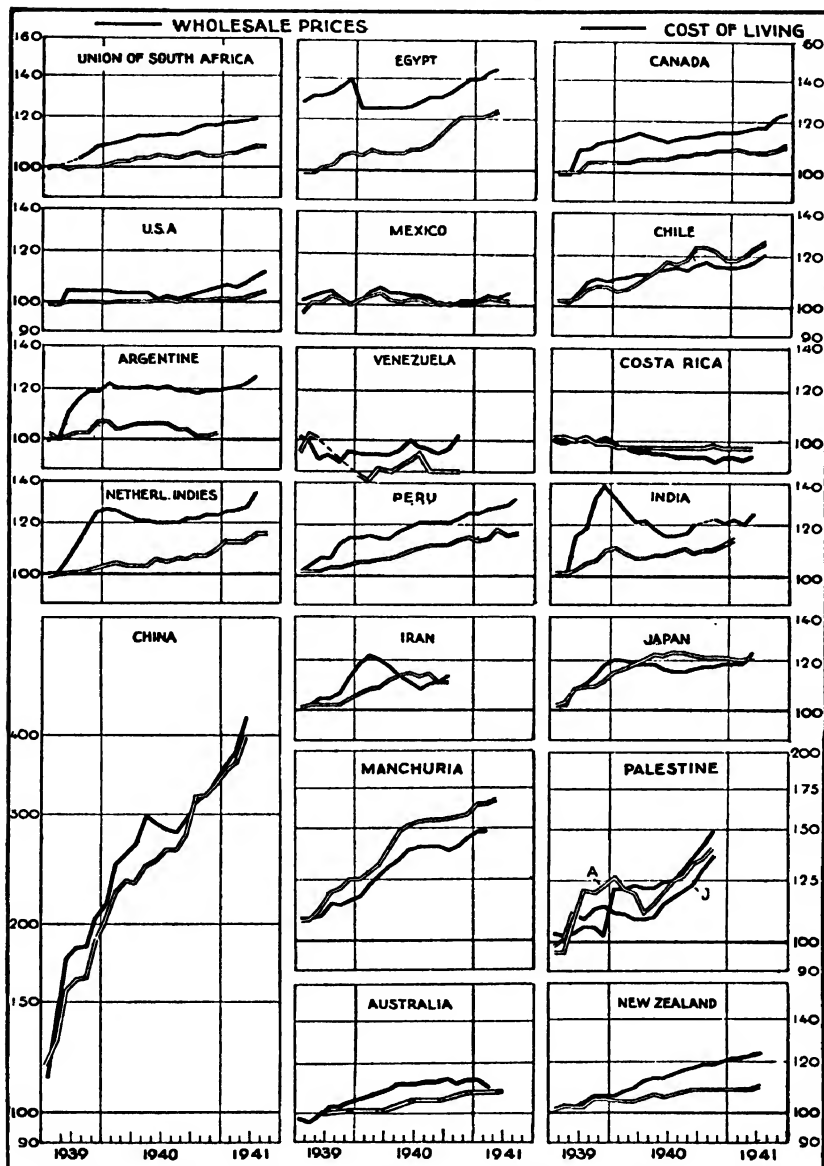
First half of 1939 = 100.



United Kingdom: A, Board of Trade; B, Economist.

*Diagram 3 (continued)*  
*Wholesale Prices and Cost of Living*

First half of 1939 = 100.



Palestine : A, Arab markets ; J, Jewish markets.

*Table 7—Money and Prices*

Percentage Changes, July 1939–May 1941

N: Notes in Circulation

D: Commercial Bank Deposits

WP: Wholesale Prices

CL: Cost of Living

	Percentage Increase from July 1939 to							
	July 1940				May 1941			
	N	D	WP	CL	N	D	WP	CL
ARGENTINE.....	9	3	21	3	10	11	29	.
AUSTRALIA.....	39	7	13	.	48	15	13	.
CANADA.....	47	3	13	5	90	17	22	8
CHILE.....	22	3	12	13	43	11	21	27
DENMARK.....	58	4	49	27	75	21	81	40 <sup>b</sup>
EGYPT.....	61	.	28	8	110	.	51	28
FINLAND.....	115	16	.	18	160	17	.	40
GERMANY.....	42	.	4	4	69	.	5	5
HUNGARY.....	32	8	20	9	97	26 <sup>b</sup>	35	22
INDIA.....	33	5	14	8	53	16 <sup>a</sup>	30	15 <sup>a</sup>
JAPAN.....	36	27	13	24	51	42 <sup>b</sup>	20	20
NEW ZEALAND.....	25	19	13	4	39	26	22	11
NORWAY.....	.	13	35	15	.	68	67	36
PERU.....	15	14	18	7	35	29	29	13
SWEDEN.....	40	—8	33	16	36	—6	55	33
SWITZERLAND.....	24	—4	33	11	21	8 <sup>b</sup>	71	25
UN. OF SOUTH AFRICA.....	13	18	13	4	18	38	22	9
UNITED KINGDOM.....	19	10	42	19	23	26	53	28
UNITED STATES.....	12	16	4	1	33	31	13	2
YUGOSLAVIA.....	66	—3	40	36	108 <sup>b</sup>	25 <sup>d</sup>	100 <sup>a</sup>	70

<sup>a</sup> April; <sup>b</sup> March; <sup>c</sup> February; <sup>d</sup> December 1940.

the United Kingdom (53%). In all of these, the price rise appears to have been determined to a considerable extent by factors on the supply side as distinct from demand. In the United Kingdom, the devaluation of the pound and the rise in freight and insurance rates played an important part.<sup>1</sup> In the Continental countries mentioned, the rise reflects largely a shortage of commodities due to the interruption of overseas supplies and the increasing absorption of local supplies by Germany. This is particularly true if comparison is made between the first and the second half of Table 7, that is, between July 1940 and May 1941.

It is interesting to observe the difference between the United Kingdom and the United States in the table. Monetary expansion has been greater in the United States than in the United Kingdom, while the rise in prices has been much greater in the United King-

<sup>1</sup> See Chapter I.

dom than in the United States. Another difference between the two countries relates to the rate of change in wholesale price indices. In the United Kingdom, the rate of increase dropped off from 42% in the 12-month period between July 1939 and July 1940 to 8% in the 10-month period between July 1940 and May 1941. (See also Diagram 3, which shows clearly a flattening out in the British price curves.) In the United States, on the other hand, the index of wholesale prices rose by only 4% in the earlier but by 9% in the later period.

The United States is, in fact, the only country in the table where the rate of increase in wholesale prices was greater in the period after July 1940 than in the twelve months before. In all other cases the percentage rise in the later period was less than in the earlier.

In twelve countries for which recent figures are available, wholesale price indices showed the following percentage increases from July 1940 to May 1941:

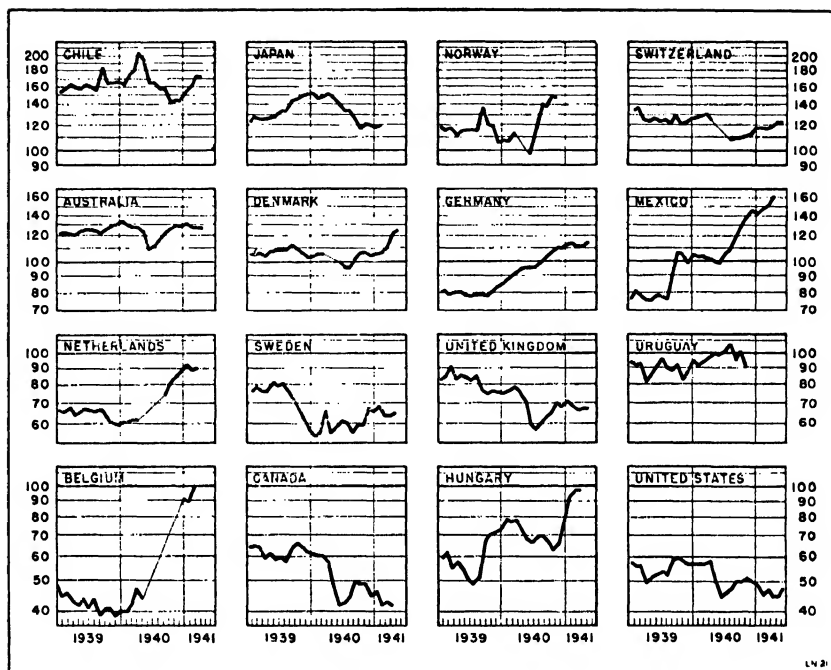
Switzerland.....	28%	United States.....	9%
Bulgaria.....	24%	United Kingdom.....	8%
Norway.....	24%	South Africa.....	8%
Denmark.....	22%	Canada.....	8%
Sweden.....	17%	Argentina.....	7%
Hungary.....	13%	Australia.....	1%

In spite of the restricted comparability of price indices, this list of countries falls naturally and significantly into two distinct geographical groups reflecting clearly the difference between their economic and monetary situation.

Yet this geographical division must not be overstressed. For one thing, it is immediately apparent from Diagram 3 that the severest case of price inflation occurred outside Continental Europe, namely, in China. In March 1941, the index of wholesale prices in Shanghai was 48% higher than in July 1940 and more than two-and-a-half times as high as in July 1939. The Shanghai cost-of-living index has shown a similar rate of increase; and from such reports as are available, it is not likely that the rise of prices has been less rapid in the interior of China.

The rise in commodity prices has not been accompanied everywhere by a rise in Stock Exchange quotations of industrial shares. Diagram 4, showing indices of the market value of industrial shares in sixteen countries, discloses a great diversity of movement. Speaking generally, it is natural that in countries where prices are rising fast, where goods are scarce, and where at the same time money is abundant, the public should develop a strong preference for shares as a safeguard against capital loss through inflation, even if their

*Diagram 4*  
*Prices of Industrial Shares*  
1929 = 100



present yield is negligible. On the other hand, where the rise in prices is less pronounced, and where the present or prospective supply of goods is adequate, share quotations may decline under the influence of war-time taxation, limitation of profits, etc., even if investible funds are plentiful.

To bring out more clearly the direction of recent changes, twelve of the countries included in Diagram 4 are given below in the order of increase in their industrial share indices from April 1940 (that is, before the sharp fall of the early summer) to April 1941.

Belgium.....	+ 118%	Australia.....	- 2%
Hungary.....	+ 70%	United Kingdom.....	- 12%
Netherlands.....	+ 61%	Chile.....	- 17%
Norway.....	+ 54% <sup>a</sup>	Japan.....	- 18% <sup>b</sup>
Germany.....	+ 20%	United States.....	- 22%
Denmark.....	+ 16% <sup>a</sup>	Canada.....	- 27%

<sup>a</sup> March 1940 to April 1941. <sup>b</sup> February 1940 to February 1941.

The countries fall naturally into two groups, and the difference between them is striking. In Germany and the countries under her control, there has been great rise in share values, while in the rest of the world the trend of quotations has, on the whole, been downward. It may be mentioned that in France and Italy, where publication of the relevant indices has been suspended, share prices have likewise shown very considerable increases. In the occupied countries generally, German purchases of industrial equities, financed by "occupation costs"<sup>1</sup> and other means, have been a special factor contributing to the rise in quotations, though the greater part of the rise has no doubt been due to the general monetary expansion combined with the lack of other outlets of expenditure owing to the shortage of goods.

This rise in industrial security prices in the countries under German domination has taken place in spite of various measures designed to limit dividend payments and to curb Stock Exchange transactions. In Belgium, regulations were issued in March 1941, under which no Stock Exchange quotation was allowed to exceed the previous day's quotation by more than 1%. A similar measure to limit price advances was introduced on the Paris *Bourse* in April. Moreover, a law was published in France early in March 1941 which made it illegal for any company to distribute a higher dividend than the highest during the last three years. In Norway, dividends were limited to 5% or in certain cases 8% by a decree of January 1941. In the latter part of 1940, a similar limitation was imposed in Denmark. In Germany, confiscatory taxation of dividends exceeding 6% was announced in March 1941 and became effective in June.

In Italy, a 7% limit on dividends and a special tax on income from industrial securities were introduced in December 1940 in order to discourage the demand for shares. In a report published by a German source in March 1941, it was stated that these measures "had not been successful in permanently checking the upward movement in share prices," and that after a short relapse, quotations rose again, "so that the actual yield of shares was at most 2-3% compared with over 5% for fixed interest securities."<sup>2</sup>

As already indicated, in countries where the public showed no abnormal appetite for shares, it was the actual or prospective yield that determined their price, and the yield was adversely affected by war-time taxation and Government control. The decline in the long-term interest rates at which these yields were capitalized was not sufficient to prevent a fall in share prices. In Japan, the fall was

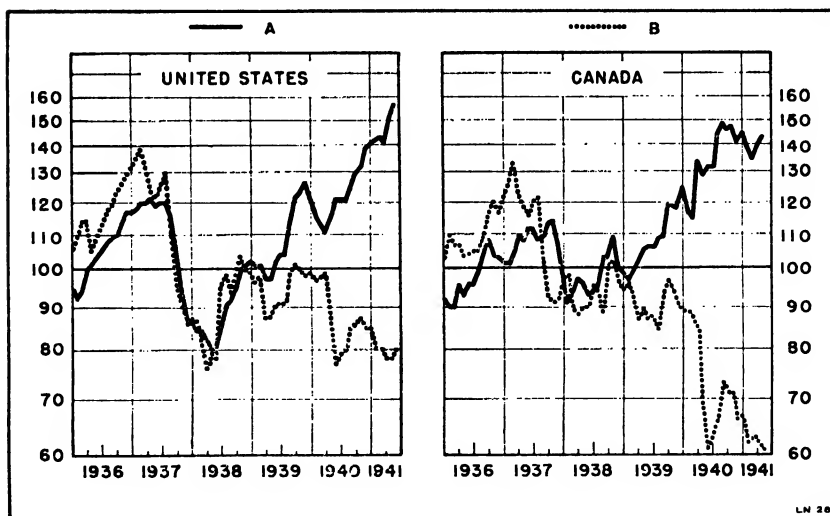
<sup>1</sup> See Chapter V.

<sup>2</sup> *Frankfurter Zeitung*, March 17th, 1941.

accompanied, in 1940, by a decline in industrial output.<sup>1</sup> Elsewhere, share prices declined even when the volume of production was rapidly increasing. The contrast between industrial production and share prices was very marked in Canada and the United States, as will be seen from Diagram 5. It is hardly possible to attribute this contrast to the sale of Canadian and, more especially, United States securities formerly held in the United Kingdom. British-held dollar securities sold in the United States from the beginning of September 1939 to the end of 1940 amounted to about \$350 million,<sup>2</sup> which was less than 1% of the total marked value of shares listed on stock exchanges in the United States. If it is true that share prices reflect the general trend of profit expectations (in the past, this assumption has sometimes been made), then the diagram would seem to suggest a weakening in the influence of the profit anticipations on the course of production in the defence economy of these countries.

*Diagram 5*  
*Industrial Production (A) and Share Prices (B)*

1935-39 = 100



One of the most remarkable monetary phenomena in this war has been the reduction in interest rates in practically all parts of the world. In the autumn of 1939 and again in the spring of 1940, the public's demand for liquid resources temporarily outstripped the

<sup>1</sup> Cf. Chapter I, Diagram 3.

<sup>2</sup> Cf. Chapter V below, Table I.



supply, and there was in many countries an appreciable hardening of interest rates on both occasions. Since the middle of 1940, however, bond yields and money rates have declined almost everywhere, as a result of the great liquidity which monetary expansion has brought about.

The movement of interest rates since the middle of 1940 shows no divergent tendencies in different geographical groups. On the European Continent, in particular (with the notable exception of Italy), the fall in interest rates has been, on the whole, at least as marked as elsewhere. That interest rates (including the yield of long-term bonds) should decline in a condition of general scarcity, rising commodity prices and rapidly rising share values, is unusual. Inflation or fear of inflation has usually produced a rise in the money rate of interest, owing to the depreciation, in real terms, of fixed claims on money. But in the countries of Continental Europe, and particularly in those under German control, competition for goods is severely limited by rationing and price controls; as a result, monetary funds have to some extent become unusable except for the purchase of securities; and as the available supply of shares has been limited (new issues being practically suspended), there has been an overflow of funds from the market for equities into the market for debts. The result has been a fall in interest rates even though the supply of debts in the form of Government securities has been rapidly increasing.

Outside the Continent of Europe, the decline in profit expectations and share prices has strengthened the effect of monetary liquidity on the course of interest rates.

The long-term rate of interest as expressed by the percentage yield of Government bonds in sixteen countries is shown in Diagram 6. In the spring or early summer of 1941, bond yields were in most cases lower than in the pre-war part of 1939. In the United Kingdom, the yield of Government bonds was lower than at any time since January 1937; in France, it was at the lowest level observed for over 10 years; in Denmark, it was the lowest since the early part of 1935; in Belgium, it was the lowest since the spring of 1938; while in Norway and the United States, the yield of bonds in the spring of 1941 was the lowest on record. In Italy, on the other hand, Government bond yields were remarkably high in comparison with other countries, and showed no tendency to fall.

Short-term money rates have become a less sensitive index of market conditions, being controlled to a large extent by the banks. The fact that in the United Kingdom, for example, the discount rate on Treasury bills did not return to the pre-war level of a little over  $\frac{1}{2}\%$  was due to a decision of the clearing banks, in view of increased working costs, to keep their short loan rate to the discount market at

1% instead of  $\frac{1}{2}$ %. The same rigidity of short-term rates is apparent in some of the other countries included in Diagram 6. Yet in a number of cases, including Canada, India, Germany, Switzerland, reductions have occurred since the early summer of 1940.

Furthermore, there has been a widespread tendency on the part of central banks to lower their official rates of discount, as may be seen from the following statement:

*Changes in Discount Rates of Central Banks  
during 1940 and the first half of 1941*

	From	To	Date
	%	%	
Belgium.....	2½	2	Jan. 1940
Bolivia.....	6½	6	Nov. 1940
Bulgaria.....	6	5½	Oct. 1940
Bulgaria.....	5½	5	Dec. 1940
Czecho-Slovakia <sup>a</sup> .....	3	3½	Oct. 1940
Denmark.....	5½	4½	Apr. 1940
Denmark.....	4½	4	Oct. 1940
France.....	2	1¾	Mar. 1941
Germany.....	4	3½	Apr. 1940
Hungary.....	4	3	Oct. 1940
Latvia.....	4½	5	Feb. 1940
Mexico.....	3	4	Jan. 1941
Netherlands.....	3	2½	June 1941
New Zealand.....	3	2	May 1940
Peru.....	6	5	Aug. 1940
Portugal.....	4½	4	Mar. 1941
Roumania.....	3½	3	Nov. 1940
South Africa.....	3½	3	June 1941
Sweden.....	3	3½	May 1940
Sweden.....	3½	3	May 1941

<sup>a</sup> "Bohemia and Moravia."

Speaking generally, the importance of the interest rate in a war economy today is necessarily much reduced in comparison with the peace-time price economy. The rate of interest can have little if any effect on prices when the volume of Government borrowing is not dependent on interest considerations and when private investment is either non-existent or closely controlled by the State. Though the reduction in interest rates described above has been caused in the first instance by the great liquidity resulting from monetary expansion, it is in accord with more deep-seated facts and tendencies. In a free price economy, interest provides an inducement to abstain from consumption and to save. In a war economy, this inducement may be replaced to some extent by the patriotic appeal; or alternatively, as rationing becomes general, the inducement may become less necessary as people are prevented from spending the whole of their available

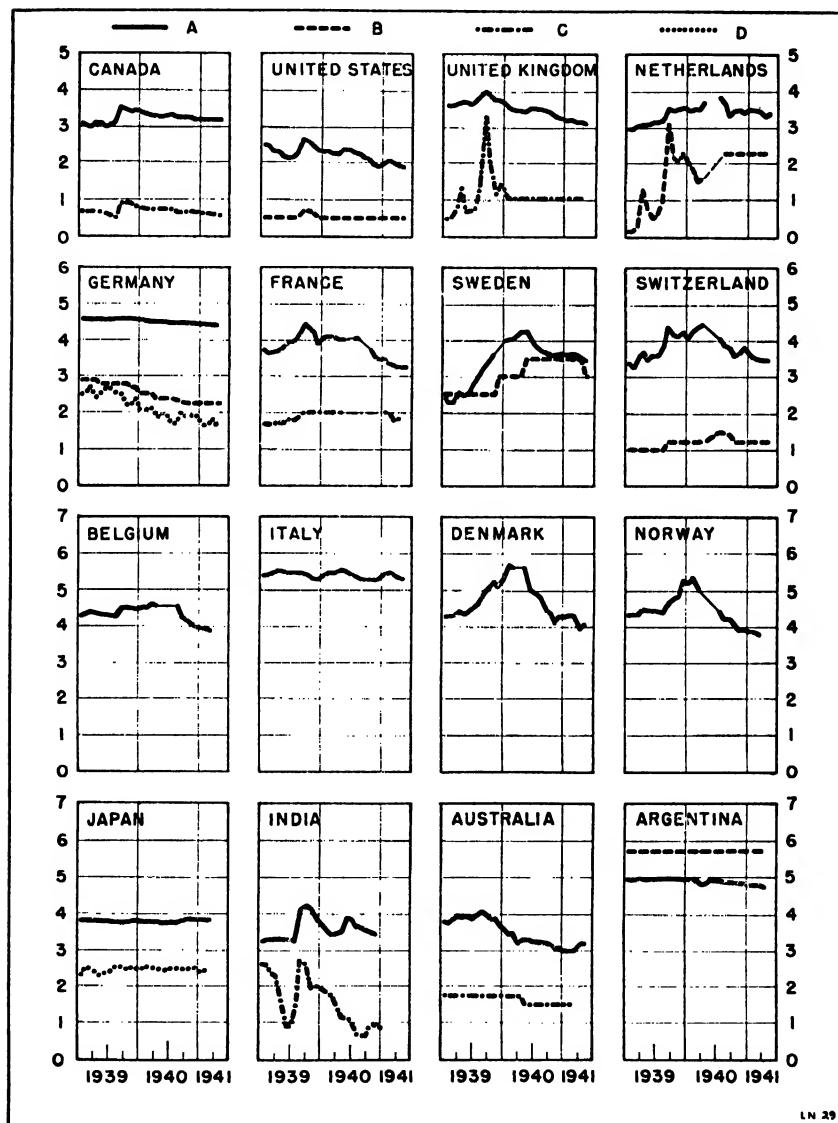
*Diagram 6*  
*Bond Yields and Money Rates*

**A** Government bonds.

**B** Commercial bills or acceptances.

**C** Treasury bills.

**D** Day-to-day money.



income and thus simply cannot help saving. On the other hand, since the rate of interest is normally held to be based at least in part on the productivity of capital, and since savings in a war economy are applied to a purpose where productivity is zero, it is natural and desirable that the interest rate should be as close to zero as possible. In most countries, Government borrowing is taking place at much lower rates in this war than in the last. The lower the rate on war-time borrowing, the less the need for difficult and drastic methods of dealing with the interest burden after the war.

### PRICE CONTROL

The expansion of purchasing power resulting from the increase in Government expenditures created in many countries a strong tendency for prices to rise. A rise in the cost of living tends to reduce the level of consumption. Such a reduction may be necessary to free resources for war or defence; but if its incidence is directed by the haphazard and, indeed, generally regressive action of prices, much friction and social disturbance may ensue. In certain countries of Central and Eastern Europe, moreover, where memories of hyperinflation were vivid, an appreciable rise in prices might have caused a flight into commodities and a loss of confidence in the currency. Apart from the indirect means of fiscal and financial policy, measures were therefore widely adopted acting on prices directly, in order to restrict and retard their rise.

These measures have taken a great many different forms. Specific prices of various goods and services have sometimes been fixed by the authorities; more frequently maximum prices have been established; or, again, certain price relationships have been prescribed, most commonly between costs and selling prices. In Germany, Switzerland, and New Zealand, for instance, business men have been required in cases of increased costs to reduce the percentage margin between costs and selling prices so as not to increase the absolute margin. Many countries have taken measures to eliminate unnecessary middlemen and their profits. In some countries, such as Japan and Germany, profits have had to be pooled or equalized in certain industries so as to keep down selling prices to cover the costs of the average rather than of the marginal producer. The price at which old stocks should be disposed of has been another matter for official regulation. Holders of stocks have usually been required to sell them at cost prices; in a few countries, including Sweden, however, the principle of replacement value has been accepted.

In many countries, the Government issued at the outbreak of war a general prohibition of price increases above the level prevailing at a given date. Such a "price-stop" had been in force in Germany since October 1936. In the autumn of 1939, it was imposed in a number of other countries, including France, Switzerland, Hungary, Bulgaria; and in the spring of 1940, it was extended to the countries occupied by Germany. In July 1940, an extensive price and wage stop was decreed in Italy.<sup>1</sup>

The price-stop decrees were not always intended to prevent price increases altogether. Sometimes, their purpose was merely to bring prices under official control, to make all increases subject to authorization and to prevent only such increases as seemed unjustified. In fact, the official price indices in some of the countries where price-stops were imposed showed appreciable advances later (see Diagram 3).

<sup>1</sup> A frank and informative description of the Italian price situation appeared in an article, published in Italy, by Giovanni Selvi: "La difesa della lira" in *Echi e Commenti*, May 5th, 1941. In view of the complete suppression of the official Italian price statistics, the following extracts may be quoted from that article:

"The Government has established the price block in regard to certain needs and services, and associates this with control and regulation in certain other sectors of economic life and, as and where it can, it seeks as far as possible to preserve prices from inflationary increases. Has it succeeded in doing this?

"The price block has been applied and is in force with regard to house rents and public services (electric energy, gas, telegraph, telephone, post, public transport and State monopolies). . . . In these sectors the lira is worth today as much as it was worth before the increase in the amount of currency in circulation, but there are many sectors that are not blocked and not regulated and which it is difficult to regulate, and in these the lira has lost 20, 30, 50 and even 100 per cent of its purchasing power.

"In the clothing branch, regulation of costs from producer to consumer in the case of certain standard products has recently been introduced. . . . Similar action is being taken in certain other sectors, but nearly all products of an industrial character escape all measures for imposing a block or control. The Under-Secretary for War Manufactures fixes and regulates the prices of materials required for warlike production and for industrial production. There is thus a check on speculative increases which, in this field particularly, would have been unlimited. Nevertheless prices—*underhand* prices have entered into current practice—are free and have risen rapidly. . . .

"The sector which, more than any other, calls for special consideration, however, is the foodstuffs sector. . . . Without giving statistics and figures that are frequently only too subject to change, and merely relative as compared with the realities of the case, it can be stated as an undeniable fact that the cost of living has risen continuously. To be convinced of this, all that one need do is to go into the market place or to open a kitchen account book. Let us talk of salads and onions, rabbits and poultry, eggs and fruit, salted meats and wine, even if this should bring a wrinkle to the nose of economists and financial experts in their professorial gowns and lecture halls. Poultry which cost 15-20 lire a kilogramme last year has gone up to 35-40 lire; the rabbit, the humble, self-supporting rabbit, has gone up from 6 to 15 lire a kilogramme. The prices of fruit and of green vegetables have, for some

Official price regulation through price-stop decrees or otherwise does not by itself alter the forces of supply and demand. When a price is kept down artificially, demand will exceed supply, and the commodity may disappear from the market. To render price control effective, demand has had to be restricted through rationing, priorities and similar means. In Germany, after the proclamation of the price-stop in 1936, the restriction of demand by such measures was carried to great lengths, culminating in the general scheme of rationing imposed at the outbreak of war. In France, where a price-stop was imposed in September 1939 without the necessary checks on demand (rationing being practically non-existent up to the spring of 1940), commodities tended to be withheld by the sellers, and black markets developed on a considerable scale.

The only field where, in the face of real scarcity, a price-stop has actually stopped price increases without the aid of quantitative restrictions on demand would seem to be that of rents. Rents have been officially pegged and, it would seem, actually more or less stabilized, in most countries of Europe, in Japan and in defence areas in Canada.

But the tendency for prices to rise, especially at the beginning of the war, was not only due to real scarcity. The impelling factor was often an *expectation* of scarcity, the fear (or hope) of a future rise in price. In such a situation, the ordinary law of supply and demand may cease to function. An initial rise in price creates the impression that prices will rise further. In consequence, demand will increase, and supply will be withheld. Maximum price regulations, accompanied by moral pressure, penalties, or threats of publicity, have sometimes been effective in curbing such speculative tendencies.

varieties and at certain periods, doubled. The prices of wine, salted meats and fats, have increased in proportions varying between 25 and 50 per cent, and the percentage increase in the cost of butter has been markedly greater. . . .

"Some price increases are the result of seasonal and productive movements or are due to special circumstances. Some increases are due to greater intermediate costs and are inevitable. Some were, in the first place, regarded as necessary. . . . On these normal and regular increases, however, there have been grafted considerably greater increases of a purely speculative character due to the disproportion between, on the one hand, the scarcity of goods, or the more active demand for goods, and, on the other hand, the abundance of money which is widely offered, and often dishonestly offered, in the form of premiums for the purpose of cornering and hoarding rationed articles. It is these inflationary prices which constitute a depreciation of the lira in one of the widest sectors in which it has to perform its work.

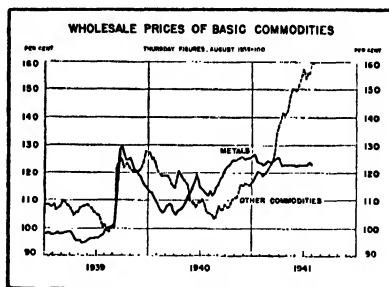
"There is, furthermore, one sector of consumers' goods which, more than any other, seems most readily to yield to the attraction of the whirlpool of inflation. I mean the so-called pleasure and luxury articles of consumption. . . . There are luxury trades, bars, pastrycooks, restaurants and shops, where the impression is readily created that money has already depreciated to the extent of 50, 70 or 100 per cent."

Other methods have also been used to influence the price expectations of the public and their behaviour on the market. In Switzerland, for example, retail stores were asked in the autumn of 1940 not to give publicity to price increases. In the United States, the major retail organizations undertook to ask their members to desist from "scare advertising." In Canada, a speculative wave of sugar hoarding was mastered by feeding all available stocks to the market.

The "ceilings" set on certain wholesale prices in the United States in the early months of 1941 were mainly aimed at combating speculative developments. It was officially pointed out that the rise in prices was due to the accumulation of more or less speculative inventories and not to any real scarcity. Maximum prices were established for most non-ferrous metals, steel scrap, and iron and steel mill products except pig iron. Prices of steel scrap declined after reaching a peak at the beginning of the year and prices of non-ferrous metals were reduced in the spring. As a result, there developed a sharp contrast between the movement of metal prices and that of other basic commodities, as shown in the accompanying diagram. The rise in the

*Diagram 7*  
*Wholesale Prices in*  
*the United States*

Source: Board of Governors of the Federal Reserve System. Based on Bureau of Labor Statistics index of 28 basic commodities. Federal Reserve classification of 6 metals and 22 other commodities. Latest figures shown are for July 31st, 1941.



latter group was partly due to certain Government measures tending to raise prices of farm products, to which reference is made below. In May 1941, Federal action to limit price advances was extended to commodities other than metals (such as cotton yarn, and certain imported commodities).<sup>1</sup>

It should be mentioned that the stability of metal prices in the United States, though undoubtedly due in large measure to the elimination of forward buying, was supported by some restriction of demand in the form of industrial priorities.

Speculative tendencies have proved fully amenable to control when supplies have been adequate to meet all legitimate demands. But the "speculation" which has invariably developed in conditions of real scarcity combined with currency inflation has been of a different

<sup>1</sup> Cf. *Federal Reserve Bulletin*, June 1941, pages 498-99.

order. In such countries as China, Italy, and Yugoslavia, hoarding and cornering of goods on the part of speculators has been blamed for the rise in prices.<sup>1</sup> But experience has shown that commodity hoarding and speculation always develop when inflation is in progress. This is simply the familiar "flight into commodities"; it is a consequence of inflation rather than its cause. In such conditions, official price fixing has proved of little effect if unsupported by drastic checks on demand.

In Germany, price fixing has been accompanied by extremely drastic checks on demand. The "price-stop" introduced in 1936 was retained at the beginning of the war. But prices were no longer justified merely because they complied with the price-stop decree. Failure to reduce prices to the utmost possible extent was made a punishable offence in the same way as an unjustified increase.<sup>2</sup> Under the War Economy Decree of September 4th, 1939, special cost increases such as those resulting from war risks or even war losses were not allowed to be passed on in higher prices. In general, the price control came to be used increasingly as a means of enforcing efficiency and economy in production. This was important since competition and the profit motive—the forces that ensure efficiency and economy in a free price system—were more and more eliminated. Yet, within the framework of the price control, certain elements of competition have been retained. Thus, for example, an order was issued on April 15th, 1941, fixing the prices and margins applicable to each stage in the process of manufacture and distribution for certain standardized articles of clothing. Only those weavers who could deliver the cloth at the fixed price were to receive the requisite supply of yarn; only those manufacturers who could turn out the finished article at the fixed price were to receive the cloth, and so on. This system naturally involved the concentration of manufacture in the low-cost undertakings.

Germany is not the only country where price control has been treated as an instrument to promote economy in production. In the

<sup>1</sup> In the Italian article quoted above, reference was repeatedly made to speculation as a cause of the rise in prices. In Yugoslavia, the Finance Minister made a statement in January 1941 attributing the price rise to "the immoral, unscrupulous and almost criminal greed" of speculators (Cf. *Neue Zürcher Zeitung*, February 13th, 1941).

<sup>2</sup> An attempt was made at the beginning of the war even to reduce wages, but it proved unsuccessful. (See Chapter I, page 29.) To what extent the German price control has been effective is difficult to judge. There is no doubt as to the existence of "black markets" in Germany, since penalties for infringements of the price regulations are frequently reported in the German press. Moreover, German publications (such as *Der deutsche Volkswirt* of March 7th, 1941) have admitted that "non-essential" consumption goods not subject to the same degree of rationing as the "essential" have substantially increased in price. Such goods seem to enter hardly if at all into the composition of the official indices.



United States, for example, it has been pointed out that, if all increases in cost should be reflected in price increases, this would "put every manufacturer on a cost-plus basis; a cost-plus basis . . . does not stimulate the individual manufacturer to strenuous efforts to keep prices down. . . . An agreement in advance that price increases which result from wage advances will be approved would cause many business men to become careless in their negotiations on wages. . . . Business must be asked to absorb cost increases up to the point where profits are at a reasonable level."<sup>1</sup>

Thus the emphasis has tended to shift from protection of the consumer to efficiency and direction of output. Prices have sometimes been deliberately raised in order to stimulate production. This has been the case for agricultural prices in the United Kingdom, the Netherlands and Germany, for example. In Germany, an important instance of this policy was the increase in the price of milk and butter in March 1940, designed to combat the shortage of fats.

In Japan, price control (established in 1937) has continually wavered between the Government's declared low price policy and the need to pay high prices to secure maximum production, especially of armaments. The Japanese price control, comprising both a general price-stop and the fixing of 100,000 prices of individual commodities, was therefore constantly in the nature of a compromise and, according to a Japanese publication of October 1940, had actually "very little effect."<sup>2</sup> More recently, a solution seems to have been sought in a rigorous application of price control to consumers' goods (combined with restriction of consumers' demand by rationing, wage control and compulsory saving) while allowing prices of war materials to rise.<sup>3</sup> According to the available indices, prices of "producers' goods" rose by 6% in the second half of 1940 while those of consumers' goods declined by 2%. This may be contrasted with movements in the United States, where metals declined in price in the first half of 1941, while other commodities were allowed to rise.

The measures described so far relate in the main to the domestic market. The control of import prices has received special attention in certain countries. Thus Germany's insistence on a high exchange value for the Reichsmark<sup>4</sup> has been motivated by her desire to import at low prices in terms of the national currency. It has undoubtedly helped to keep down the general price level in Germany; at the same time, of course, it has made it more difficult to prevent prices from

<sup>1</sup> Leon Henderson and Donald M. Nelson, "Prices, Profits and Government," *Harvard Business Review*, Summer Number 1941.

<sup>2</sup> *Oriental Economist*, October 1940.

<sup>3</sup> Cf. *New York Times*, June 15th, 1941.

<sup>4</sup> See Chapter V.

rising in the countries exporting to Germany. The Danish Government and National Bank proposed early in 1941 to revalue the krone in order to check the rise in prices; but the proposal was abandoned in view of German opposition. In the trade with countries under her control, Germany removed her export subsidies and thus increased the prices of her export goods. In the Netherlands and other occupied countries, it was expressly provided that the price-stop introduced after the occupation was not applicable to imported goods. There was thus a sharp deterioration in the terms of trade of these countries, which, as money wages were kept down, showed itself in a fall in real wages. In an article published in *Wirtschaftsdienst* on October 8th, 1940, the head of the Economic Department attached to the German Commissioner in Norway expressed the hope that "with the reduction of real wages and, consequently, the standard of living, the conditions for the integration of the Norwegian economy into the economy of Europe will one day be completed."

In some cases, prices of imported goods have been kept down at the expense of the Treasury. Switzerland, Sweden and Saudi Arabia have sacrificed Government revenue by reducing import duties for this purpose. The policy of subsidizing imports, widely applied during and after the war of 1914-18, was taken up again in a number of countries, including France, the Netherlands, Switzerland and Japan.

The system of subsidies found its most general application in the United Kingdom. From December 1939, the retail prices of important foodstuffs including bread, milk and bacon were held down by Government subsidies at a cost of about £100 million in the twelve months to March 1941.<sup>1</sup> In his Budget speech of April 7th, 1941, the Chancellor of the Exchequer announced a further extension of this policy so as to stabilize the cost of living index as a whole, though not each individual item, at a range of 125 to 130% of the pre-war level. The subsidies were to cover increases of prices of imported goods and of transport costs but not of wages. When, therefore, a few weeks later, the wages of coal miners were raised, the price of coal (except for household use) was also increased.

The general policy of subsidizing the cost of living in the United Kingdom was intended to create conditions in which the level of wages could be held reasonably stable.<sup>2</sup> Many other countries have taken action to prevent an upward spiral of wages and prices, but the more frequent method has been to act directly on wages instead of on the cost of living. Japan, France and Germany decreed a complete or partial wage-stop in the early months of the war. A wage-

<sup>1</sup> Other measures of price control in the United Kingdom in the early months of the war are referred to in Chapter I.

<sup>2</sup> Cf. Budget speech, *The Times*, April 8th, 1941.

stop was immediately proclaimed in each of the countries occupied by Germany. The sliding scales whereby wages had been adjusted to the cost of living in Belgium, Denmark and Norway were abolished. In Norway, wage supplements granted in the preceding months were withdrawn. Though certain increases in wages have since been made, real wages have suffered a considerable decline.

In Sweden, under the terms of a collective contract signed in December 1939, wage rates were to be increased by only 75% of the rise in the cost of living. A new agreement was concluded in January 1941, restricting further the possible increase in wages.

In Canada, an Order of December 16th, 1940, provided that there should be no increase in basic wage rates above the maximum wage paid in the period since 1926; at the same time, it introduced a cost-of-living bonus of \$1.25 per week for each rise of 5% in the cost of living.

In certain primary producing countries, the problem of war-time price control was to check a *fall* in prices rather than a rise. Stocks of basic commodities accumulated owing to the loss of European markets, and attempts were made by the Governments concerned to prevent these stocks from unduly depressing prices and producers' incomes.

Neither the problem nor the methods of dealing with it were new. In countries such as the Argentine, Brazil and the United States, various measures had been adopted in the preceding ten years to counteract the oversupply of primary products and the decline of agricultural prices. After the outbreak of the war, many of these measures were simply continued or extended. Governments fixed minimum prices or undertook to make purchases for stock or took measures to stimulate domestic demand for products affected by the loss of foreign demand. In certain cases, they found a market for surplus goods by offering them at a lower price to consumers in the lowest income classes. The United States food stamp plan, initiated in May 1939, is the most remarkable example of this policy of price discrimination designed to dispose of surplus products while keeping up prices for the majority of buyers.<sup>1</sup> There have been similar measures elsewhere, for example, in Canada, to clear apples for which the overseas market had fallen away.

<sup>1</sup> Under this plan families on relief or with very low incomes are given one blue stamp for every two orange stamps they buy at par (all stamps are for the value of 25 cents). The orange stamps can be used to purchase any foodstuffs; the blue stamps for the purchase of certain foods designated as "surplus commodities." The stamps have to be accepted at their par value by retailers, who collect their counter-value in money. Thus the ordinary channels of trade are used to dispose of the surplus commodities. There is an understanding between the authorities and the retailers as to the prices charged by the latter for commodities sold under this scheme.

Instead of buying at a guaranteed price, Governments have often used crop loans to induce primary producers to withhold surplus stocks from the market. In the United States, a law was passed in May 1941 under which producers of wheat, corn, cotton, tobacco and rice were to receive loans up to 85% of the "parity price," that is, the price at which farmers' purchasing power over non-farm commodities would be the same as during the period from August 1909 to July 1914.

## CHAPTER V

### INTERNATIONAL MONETARY RELATIONS

There was an important difference in the international financial position of the two principal belligerents at the beginning of the war. The United Kingdom had large foreign assets at her disposal: gold, foreign bank balances and investments of various kinds. Thanks to these assets the British Government was able to finance a much larger volume of purchases from overseas countries than would have been possible otherwise. The importance of this factor in a nation's war economy will be readily appreciated. In the absence of borrowing or direct assistance from abroad, the sale of existing foreign assets is the only means whereby a country can draw upon the economic resources of the outside world to secure the goods and services needed for the war effort without having to furnish exports in return. The problem of financing a war-time "import surplus" constitutes what may be called the problem of external war finance, as distinct from the problem of internal war finance (dealt with in the preceding chapter), which is concerned with the mobilization of domestic resources.

Germany started the war almost without any foreign assets. The method of "external financing" as employed by the United Kingdom was not open to her. Through military conquest and political pressure, however, Germany acquired the means to extract economic "assistance" from other countries. Especially after the spring of 1940, she obtained supplies of commodities from countries under her control without having to provide a corresponding volume of exports in exchange. The financial methods used for this purpose, though obviously of secondary importance in comparison with force, will be mentioned in the last section of this chapter. Let us begin by considering the methods of external finance practised by the United Kingdom from the very outset of the war.

#### BRITISH EXCHANGE CONTROL<sup>1</sup>

Mobilization of foreign exchange resources for the financing of war purchases abroad was the main objective of the British system

<sup>1</sup> The exchange restrictions introduced in the United Kingdom and in a number of other countries at the beginning of the war were examined in some detail in

of exchange control adopted in September 1939. In this respect the British control differed widely from the currency restrictions introduced elsewhere in, say, 1931 or 1932. These were adopted in most cases by debtor countries, and were closely bound up with transfer moratoria and similar measures. In the British regulations, provisions for the compulsory declaration, registration and sale of private holdings of gold, foreign exchange and foreign securities played a prominent part.

The mobilization of exchange resources made it necessary to prevent or restrict the export of capital from the United Kingdom. Exports of domestic capital were completely prohibited. The case of foreign-owned funds was less simple. The British authorities refused to supply exchange for the withdrawal of such funds at official rates. But since the transfer of sterling balances from foreign to British ownership was not prohibited—since, in other words, foreign balances in the United Kingdom were not “blocked”—foreign holders could sell their sterling balances to other foreigners who had payments to make in the United Kingdom, say, for goods purchased there. Thus an unofficial exchange market in sterling grew up in certain centres outside the United Kingdom, principally in New York, where the rates quoted were often considerably below the official mean rate of \$4.03 to the pound. The effect of this system was that a part of the proceeds of British exports became available, not to the British authorities, but to the non-residents who were liquidating their sterling balances. According to an official estimate, such capital withdrawals amounted altogether to about \$300 million.<sup>1</sup>

This system was radically altered in June and July 1940. In the first place, foreign holdings of British securities were virtually “blocked”: permission was no longer granted to sell such securities in the United Kingdom or to transfer the proceeds through the unofficial market.<sup>2</sup> Secondly, the export trade was subjected to a

*Money and Banking, 1939/40*, Vol. 1 (*Monetary Review*), published by the League of Nations in May 1940. The information given in that volume is not repeated here. In particular, no reference is made here to the French system of exchange control, which, as it stood in the spring of 1940, was described in the *Monetary Review* (Chapter 1, “War-Time Control of Exchanges”). The present account is confined, in the main, to the United Kingdom and the “sterling area,” and its purpose is to bring the information given in the *Monetary Review* up to date.

<sup>1</sup> See Table 2, below.

<sup>2</sup> “Blocking” in a narrower sense was introduced in November 1940, when it was decreed that capital funds due to non-residents, originating in redemption of securities, legacies, sale of real estate, etc., must be paid into “blocked accounts.” This meant that the money could not be used for payments of any kind in the United Kingdom. It could only be invested in British Government securities.

stricter control, with a view to making it impossible to use sterling obtained in the unofficial market for the purchase of British goods. Thus, exports to the United States and to Switzerland—the two remaining “strong-currency” countries—had to be paid in U.S. dollars or Swiss francs, or in sterling bought at the official rates. For purposes of current settlements, banks in the United States and in Switzerland were allowed to operate “registered accounts” in the United Kingdom. A similar arrangement was made for Canada and Newfoundland, whose banks were permitted to open so-called “authorised accounts” in the United Kingdom. The most important unofficial market for sterling had been in New York; and the chief effect of the new regulations was to canalise into the official market all transactions between the United Kingdom (and, indeed, the whole sterling area) on the one hand and the United States on the other. As a result, the spread between the free market rate quoted in New York and the official rate in London was practically eliminated.

This facilitated the conclusion of bilateral payments agreements with other countries outside the sterling area. So long as sterling could be purchased at less than the official rate in New York, these countries had an inducement to pay for their imports from the United Kingdom with the cheaper sterling obtainable on the free market. With the virtual abolition of the free market, their reluctance to settle current payments to the United Kingdom at the official rate disappeared. The agreements which the United Kingdom concluded with them amounted in fact to bilateral exchange clearings. It was arranged that all payments between the United Kingdom and the countries concerned would be cleared through so-called “special accounts” maintained by these countries with certain authorized banks in the United Kingdom. Agreements of this kind were made with a large number of countries, such as the Argentine and Brazil in June 1940, Portugal in July, Peru and Greece in August, Uruguay in September, Chile in November and Spain in December 1940. Japan and the U.S.S.R. were among the countries with which no such agreements were concluded.

A noteworthy departure from the bilateral character of these arrangements was made in the payments agreement concluded by the United Kingdom in the spring of 1941 with twelve Central-American republics, including Cuba, Ecuador, Mexico and Venezuela. The method of settlement through “special accounts” was retained; but the twelve countries were treated as one, so that sterling balances may be freely transferred between nationals of different countries in the group.

### THE STERLING AREA

At the beginning of the war, when the pound was allowed to depreciate by 14%, most of the non-British members of the sterling group—such as Sweden, Norway, Denmark, Finland, Estonia, Latvia, Portugal—severed their link with sterling and adopted, instead, a fixed relationship with the United States dollar. Canada, Newfoundland and Hong Kong remained outside the sterling group. On the other hand, certain non-British countries such as Egypt and Iraq remained inside. With these exceptions the sterling area became practically co-extensive with the British Commonwealth of Nations. After the spring of 1940, arrangements were made with Iceland, the Netherlands Indies, the Belgian Congo and the Free French Colonies, whereby these countries became in effect members of the sterling group.<sup>1</sup>

Membership of the sterling group means two things. In the first place, the "sterling countries" keep their exchange rates fixed in relation to the pound. Secondly, they hold their external exchange reserves partly or wholly in sterling, in the form of bank balances or short-term investments in London. This second characteristic has had important results for the external war finance of the United Kingdom. The system is not new; before the war, these countries found it convenient to hold their exchange reserves in the form of sterling balances as a result of the close commercial and financial ties which they maintained with the United Kingdom. The introduction of exchange control in the United Kingdom and in all the other sterling countries reinforced this practice and strengthened the general cohesion of the system. Within the sterling area, a certain freedom of payment was maintained. Under the exchange regulations of the United Kingdom, transactions with other sterling countries were at least partly exempt from restriction. The regulations adopted in the other sterling countries provided in most cases for similar exemptions or relaxations. Thus, for all practical purposes, the sterling area became one monetary unit. Within this unit, the United Kingdom could pay for all the goods she bought with her own money, with pounds sterling.

Under this system, then, an excess of British purchases in the sterling area over payments currently effected by these countries to the United Kingdom leads automatically to an increase in their sterling exchange reserves. But that is not all. A surplus in their transactions with the non-sterling world tends likewise to increase their sterling

<sup>1</sup> France was virtually a member of the sterling group until June 1940. At the beginning of the war the franc accompanied the decline in the dollar value of the pound. In December 1939 a monetary agreement was concluded between France and the United Kingdom providing *inter alia* for unrestricted conversion of francs into sterling and *vice versa*. (See *Monetary Review*, 1940, Chapter 1.)



reserves, since the foreign exchange received is usually delivered to the British authorities in exchange for sterling funds in London. Sterling area balances in London are invested directly or indirectly in British Government obligations, principally Treasury bills. In this way the British Government obtains in effect short-term credits from the sterling area, which help to cover its budget deficit, and which represent the financial counterpart of the contribution made by these countries to the British war effort in terms of goods and services.

The increase which has taken place in the central exchange reserves of certain sterling area countries since the beginning of the war is shown in the following table. The table serves as an illustration only; it is by no means complete. It does not cover a number of lesser countries and colonial territories, for which recent figures are not available. The reserves of these lesser countries may be comparatively unimportant individually, but their aggregate amount is undoubtedly substantial. Moreover, the table, except in two cases, does not include commercial banks, which, in countries such as India and South Africa, are believed to hold considerable sterling balances. In order to facilitate comparison, the figures are given in pounds sterling, converted from the national currencies at the fixed rates of exchange which these countries maintain with the pound.

*Exchange Reserves of Certain Sterling Area Countries.*

Pounds sterling (000,000's)

	Aug. 1939	Dec. 1939	Dec. 1940	April 1941
Australia: Commonwealth Bank.....	25.3	35.7	69.4	60.0
New Zealand: Reserve Bank.....	4.6	7.0	9.3	16.4
New Zealand: Trading Banks.....	2.6	5.7	9.6	9.4
India: Reserve Bank.....	50.2	84.7	141.6	103.2
South Africa: Reserve Bank.....	6.4	8.0	0.8	0.7
Egypt: National Bank.....	17.9	21.7	34.1	35.7
Ireland: Currency Commission.....	7.5	9.4	12.6	10.9
Ireland: Irish Banks.....	61.8 <sup>a</sup>	65.4 <sup>b</sup>	68.8 <sup>b</sup>	74.0 <sup>c</sup>

<sup>a</sup> Second quarter 1939.

<sup>b</sup> Fourth quarter.

<sup>c</sup> First quarter 1941.

The figures for Australia are subject to reserve. As a result of the exchange regulations adopted in the autumn of 1939, the Commonwealth Bank at that time took over a certain amount of sterling funds from the trading banks, and the increase in the Bank's exchange reserve was partly due to this transfer.

The decline in the South African exchange reserve in 1940 was entirely due to the redemption of a South African Government loan in the United Kingdom.

It may be well to observe once more that these figures understate the funds thus rendered available to the United Kingdom, as they leave large parts of the sterling area out of account.<sup>1</sup>

Nor is this the only means by which the sterling countries have contributed to the British system of external war finance. These countries are mostly debtor countries on long-term account, and their principal creditor is the United Kingdom. Some of them have been in a position to repurchase large amounts of Government bonds and other securities which they had issued in London in the past. In this way they have placed at the disposal of the United Kingdom funds in their own local currencies, which the British Government has been able to spend on the essential materials and foodstuffs they produce.<sup>2</sup>

<sup>2</sup> In a number of cases, the British Government, in order to help the producers overseas, has used some of these funds for the purchase of large quantities of crude products not immediately required by it.

The procedure by which American dollar securities held in the United Kingdom have been requisitioned by the British Treasury and sold in New York is well known. Essentially the same policy has been applied to some extent to the United Kingdom's investments in the Empire. The case differs from the mobilization of dollar securities only in that the Empire countries, being mostly debtor countries, do not have large and well-developed capital markets to absorb the securities offered by the United Kingdom. Nevertheless, some of these countries, aided partly by the decline in their domestic interest rates— itself to some extent a result of the expansion in their central bank exchange reserves—have been able to float domestic Government loans the proceeds of which have in effect been delivered to the British Treasury in exchange for the repatriated securities.

The first example of this procedure was provided by Canada as early as October 1939, when 3½% sterling bonds amounting to \$(Canadian) 90 million or £20 million were repatriated from the United Kingdom by means of a domestic loan. Similar operations followed in 1940. Canada is not technically a member of the sterling area; she has kept her exchange rate linked to the U.S. dollar as well as to the pound since September 1939. But in the matter of monetary assistance to the United Kingdom, Canada has acted as a full member of the sterling group. Her monetary authorities have been willing to

<sup>1</sup> In addition, as a result of British purchases, there seems to have been a considerable accumulation of sterling in the special accounts of some of the countries outside the sterling area with which the United Kingdom has concluded bilateral payments agreements, and this has been similar in effect to the increase in the exchange reserves of sterling area countries. Countries such as the Argentine, Uruguay and Portugal appear to have had a strongly favourable balance of payments with the United Kingdom in 1940. Others, however, such as Brazil and Peru, have experienced a shortage rather than surplus of sterling funds in their Special Accounts in London.

hold increasing amounts of sterling in London; and she has repatriated a considerable part of her long-term sterling debt. According to official data, assistance rendered to the United Kingdom in these two forms together amounted to \$(Canadian) 487 million or about £110 million in the first eighteen months of the war. Of this, \$332 million was made available by the repatriation of securities—Dominion Government bonds alone accounting for about \$260 million—and \$155 million was provided by an increase in the sterling balances of the Canadian exchange authorities.<sup>1</sup>

The Union of South Africa, as stated before, placed a sum of £7.9 million at the disposal of the United Kingdom by redeeming a British-held sterling loan of the Union Government in June 1940.

The Government of India, in February 1940, made various types of rupee securities available to the domestic market in exchange for sterling bonds. About £24 million of India's sterling debt was repatriated during the first half of 1940.<sup>2</sup> In February 1941 the United Kingdom Government ordered the requisitioning of seven Indian sterling loans totalling £84 million with a view to returning them to India to finance its purchases there.

It is clear from these examples that the United Kingdom, besides mobilising her reserves of U.S. dollars, has also made use of her investments in debtor countries for the purposes of external war finance.<sup>3</sup>

The total nominal amount of British overseas investments at the end of 1938 has been estimated as follows:<sup>4</sup>

	£ (millions)
Dominion and Colonial Government securities.....	993
Dominion and Colonial municipal securities.....	88
Foreign Government and municipal securities.....	317
Investments in British companies operating abroad.....	1,209
Investments in foreign and Dominion companies.....	685
Unquoted investments.....	400
Total.....	3,692

The first three groups of investments consisted entirely, and the remaining groups partly, of fixed interest securities. Of the assets liquidated by the United Kingdom in debtor countries, by far the

<sup>1</sup> The Canadian balance of payments is considered further in Chapter VIII, page 231 ff.

<sup>2</sup> Cf. *The Banker*, March 1941.

<sup>3</sup> The examples given refer to Empire countries. There have been similar transactions with non-Empire debtor countries. Thus Portugal repatriated her sterling debt of £27 million in July 1940. Negotiations are known to have been in progress with the Argentine concerning the repatriation of Argentine Government and railway securities held in the United Kingdom.

<sup>4</sup> Cf. Sir Robert Kindersley: "British Overseas Investments, 1938," in *The Economic Journal*, December 1939.

greater part has consisted of fixed-interest investments (chiefly Government bonds). Repurchases of equities by debtor countries have, indeed, occurred;<sup>1</sup> but their total amount has been relatively insignificant. The liquidation of British investments in debtor countries may no doubt have far-reaching and disturbing consequences for the future; but the fact that this liquidation affects predominantly fixed-interest debts rather than equities may not be altogether undesirable. The fixed foreign debt service of primary producing countries has frequently been regarded, in the past, as a factor tending to aggravate the fluctuations in the export prices and national incomes of these countries.

### GOLD AND DOLLAR RESOURCES OF THE STERLING AREA

A full report on the financing of British purchases in the United States in the first sixteen months of the war was submitted by the United States Treasury Department to the House of Representatives on January 21st, 1941. The figures given in the next three tables are all reproduced from this statement,<sup>2</sup> which, in turn, was based on data supplied by the British Government.

The first table shows the British gold reserves, dollar balances and investments in August 1939, and December 1940.

*Table 1. United Kingdom Gold and Dollar Resources.*

\$(000,000's)	Amount held on:		
	Aug. 31, 1939	Dec. 31, 1940	Decrease
Gold.....	2,038	292	-1,746
Dollar balances.....	595	359	- 236
Marketable securities <sup>a</sup> .....	950	616	- 334
Direct and miscellaneous investments <sup>a</sup> .....	900	900	—
<b>Total.....</b>	<b>4,483</b>	<b>2,167</b>	<b>-2,316</b>

<sup>a</sup> Market value.

Of the \$292 million of gold held by the British authorities at the end of 1940, \$30 million was stored in places from which it could not be quickly or safely shipped to the United States; and \$21 million was reserved against outstanding forward exchange commitments. The remaining free gold reserve, held presumably by the Exchange Equalization Account, thus amounted to only \$241 million, the equivalent of £60 million. Of the \$359 million of dollar balances, private balances accounted for \$305 million, which was considered

<sup>1</sup> South African nationals, for example, are reported to have bought back gold mining shares from the United Kingdom. (*Cf. The Banker*, March 1941.)

<sup>2</sup> As published in the *Federal Reserve Bulletin*, February 1941.

the minimum necessary for current transactions. Of the total of \$2,167 million, therefore, \$356 million was not readily available. The net available total of British gold and dollar assets at the end of 1940 was \$1,811 million.

The extent to which the four classes of assets were utilized during the period corresponded broadly to their degree of liquidity: gold, at one end of the scale, was drawn upon heavily, while direct investments and similar assets were not reduced at all. Total gold and dollar resources declined by \$2,316 million or about £580 million; and 75% of this was accounted for by the reduction in gold reserves. Holdings of dollar securities were reduced by \$334 million, equivalent to £83 million. The amount of dollar securities requisitioned in the United Kingdom during the period seems to have been considerably greater. This shows the difficulty of liquidating large blocks of securities in a short space of time without overstraining the market. According to the official statement, not all of the \$334 million of securities sold were, in fact, sold on the capital market (that is, through banks, brokers and dealers); some were disposed of by direct sales to investors in the United States.

The decline in total gold and dollar assets by \$2,316 million reflects the United Kingdom's "dollar deficit." The balance of receipts and expenditures which gave rise to this deficit is set out in Table 2. Interest attaches chiefly to the first column of the table, relating to the amounts actually realized in the 16 months covered by the report. The second column reproduces the official estimates for 1941, which may or may not be realized in fact; and at least one of them is subject to reserve, as indicated in a footnote to the table.

The main purpose of the table is to account for the decline in the United Kingdom's gold and dollar resources from August 1939 to December 1940. But the table covers the dollar payments and dollar receipts not of the United Kingdom alone, but of the whole sterling area including the United Kingdom. "The reason for regarding the net gold and dollar expenditures of the whole sterling area as a drain on the gold and dollar resources of the United Kingdom lies in the special nature of the exchange control régime which was established in the sterling area at the outbreak of the war. Under this régime, the United Kingdom undertakes to make available to the other sterling area countries the dollar exchange which they may currently require to settle unfavourable balances in their dollar transactions. On the other hand, any surplus gold or dollar exchange which such countries may currently acquire from international transactions—or, in the case of gold, from domestic production or dis-

Table 2. Gold and Dollar Transactions of the Sterling Area.

\$(000,000's)

I. Expenditure.	Sept. 1, 1939- Dec. 31, 1940 (16 months)	Estimates for 1941
<i>Payments to United States by U.K.:</i>		
On British Government orders in the U.S.:		
Goods delivered . . . . .	*660	.
Advance payments—net. . . . .	570	.
Capital assistance—net. . . . .	150	.
Total . . . . .	1,380	b1,274
For other merchandise imp. from U.S.	705	280
For services (shipping, interest and div- idends, etc.)—net. . . . .	57	—
Total . . . . .	2,142	1,554
<i>Payments to United States by Sterling Area (excluding U.K.):</i>		
For merchandise imports from U.S. . . . .	435	333
For services—net. . . . .	18	5
Total . . . . .	453	338
<i>Payments to Countries Other Than U.S. by Sterling Area:</i>		
Balance of Sterling Area with Canada and Newfoundland settled in gold . . . . .	*225	*620
Gold and dollar payments to other countries—net . . . . .	4500	247
Total . . . . .	725	867
<i>Withdrawal of Capital from Sterling Area (principally from U.K.):</i>		
By Americans and others through sale of free sterling to American importers . . . . .	300	—
By repayment of outstanding export credits required by cash-and-carry provision of Neutrality Act. . . . .	200	—
By liquidation of forward exchange posi- tion in dollars. . . . .	235	—
Total . . . . .	735	—
<i>Miscellaneous Items and Errors of Estima- tion:</i>		
	71	—
Grand total . . . . .	4,126	2,759
II. Receipts.		
<i>Receipts from United States by United King- dom:</i>		
From merchandise exports to U.S. . . . .	205	165
From services—net. . . . .	—	15
Total . . . . .	205	180
<i>Receipts from United States by Sterling Area (excluding United Kingdom):</i>		
From merchandise exports to U.S. . . . .	640	560
Receipts by Sterling Area from sale abroad of currently mined and dishoarded gold. . . . .	965	*555
Receipts from use of gold and dollar resources held by United Kingdom at beginning of period . . . . .	2,316	1,464
Grand Total . . . . .	4,126	2,759

FOOTNOTES: See opposite page.

hoarding—is customarily made available to the United Kingdom.”<sup>1</sup> It should be noted that the sterling area for the purposes of this a total current-account deficit of \$555 million. Only a part of this—

The table is self-explanatory and needs no detailed comment. It will be seen that of the payments made on British Government orders in the United States between September 1st, 1939 and December 31st, 1940, less than half was for goods actually delivered during the period. A substantial amount was paid out as “capital assistance,” to finance the construction of plant, etc., and a still larger sum was required for advance payments on orders placed, but not filled, before the end of 1940. The estimate given for 1941, as is explained in a footnote, represents entirely the remaining payments to be made on

*Table 3. Sterling Area Transactions with Canada and Newfoundland.*

U.S. \$(000,000's)	Sept. 1, 1939- Dec. 31, 1940 (16 months)	Estimates for 1941
Payments on current account:		
By United Kingdom.....	795	.
By Sterling Area excluding United Kingdom.....	135	.
Total.....	930	.
Receipts on current account:		
By United Kingdom.....	275	.
By Sterling Area excluding United Kingdom.....	100	.
Total.....	375	.
Deficit on current account.....	555	880
Deduct: Canadian assistance to United Kingdom (repatriation of British-held Canadian securities and increase in Canadian-held sterling balances).....	330	260
Balance entered in Table 2.....	225	620

<sup>1</sup> *Federal Reserve Bulletin*, February 1941, page 100.

FOOTNOTES TO TABLE 2, OPPOSITE:

<sup>a</sup> Includes goods awaiting export at the year end, and goods exported to Canada or other countries for United Kingdom account.

<sup>b</sup> No provision is made in this figure for prepayments or deliveries on orders placed in 1941; the figure represents only payments during 1941 on British Government orders placed before the end of 1940. Because of partial prepayment of these orders in 1940, these 1941 payments will be considerably less than the value of the goods delivered for export during the year.

<sup>c</sup> For derivation of this balance see Table 3.

<sup>d</sup> Composed of gold and dollar expenditures of \$550 million and dollar receipts of \$50 million.

<sup>e</sup> South African and Australian gold exports.

orders placed in 1940 and includes no provision for new orders given in 1941.

In the sterling area's balance of payments with Canada, there was a total current-account deficit of \$555 million. Only a part of this—the "balance" of \$225 million—was settled in gold; a much larger part was covered by the repatriation of securities and the accumulation of sterling balances by the Canadian authorities, amounting to \$330 million. A comparison of this figure with the figure given earlier for the first 18 months of the war—\$(Canadian) 487 million, equal to \$(U.S.) 443 million—shows that in the first two months of 1941 Canadian assistance to the United Kingdom amounted to \$113 million. This suggests that the estimate shown for 1941—\$260 million—may be substantially exceeded.<sup>1</sup>

The amount of newly mined and dishoarded gold sold by the sterling area was \$965 million (Table 2). In addition, there was a decline by \$1,746 million in the United Kingdom's gold reserve (Table 1). Altogether, the sterling area gave up \$2,711 million of gold during these 16 months. Most of it was acquired directly by the United States. Even that part which was delivered in the first instance to Canada and other countries (\$725 million) was probably taken up ultimately by the United States.<sup>2</sup>

The sterling area's financial position was, of course, very greatly relieved by the passage of the United States Lend-Lease Act on March 11th, 1941. As a result of this law, United States aid is no longer limited by the United Kingdom's current capacity to pay. The President of the United States is empowered by the Act to lend to the United Kingdom arms and supplies required for its defence. Shortly after the signature of the Act, an appropriation of \$7,000 million was passed in order to give effect to it.<sup>3</sup> This did not mean, however, that there was no longer any need for the United Kingdom to continue the policy of mobilising its dollar assets. In fact, the policy was continued. Only a few days after the passage of the Lend-Lease Act it was announced, for example, that an important "direct" investment, the British-owned American Viscose Company, valued at over \$100 million, was sold to a group of banking firms in the United States. In July 1941, in order to obviate the need for forced and hurried sales of other assets, the Reconstruction Finance

<sup>1</sup> See Chapter VIII, page 231.

<sup>2</sup> In the case of Canada, there is no doubt that the gold was passed on to the United States. The Canadian balance of payments with the United States is believed to have shown a deficit of approximately \$(Can.) 300 million in the calendar year 1940; and in addition to the gold received from the sterling area, part of Canada's own holdings of gold and U.S. dollar balances was required to meet this deficit. (Cf. *The Monetary Times*, Montreal, April 26th, 1941.)

<sup>3</sup> Cf. Chapter VIII, page 229.



Corporation of the United States Federal Government was authorized to make a loan of \$425 million to the United Kingdom on the collateral of British-owned dollar securities and direct investments in the United States.

In April 1941, an agreement was concluded between the United States and Canada by which the lend-lease arrangement was extended to that portion of the United States exports to Canada destined to be re-exported to the United Kingdom after fabrication in Canada. Canada's problem of financing her trade deficit with the United States and the resulting strain on her United States dollar resources were thereby substantially alleviated, though by no means entirely removed.

#### INTERNATIONAL FINANCIAL RELATIONS OF THE UNITED STATES

For many years before the war the United States received an almost continuous flow of capital funds from the rest of the world and especially from Europe. Just before the outbreak of war, foreign countries are estimated to have held nearly ten billion dollars' worth of bank balances, securities and other investments in the United States.<sup>1</sup> In addition they held over ten billion dollars of gold. As the United States had become practically the only gold importing country in the world, this gold was in effect equivalent to dollar balances; and a large part of it had already been shipped to the United States and was held there under earmark.

After the outbreak of the war, all assets held in the United States by countries conquered or occupied were blocked by the Treasury in order to prevent them from being utilized by the invader. The following were the amounts of assets frozen in the United States at the time of the conquest or occupation of the countries concerned in the spring and summer of 1940:

	\$(000,000's)
Norway.....	175
Denmark.....	92
Netherlands.....	1,619
Belgium.....	760
Luxemburg.....	48
France.....	1,593
Estonia, Latvia, Lithuania.....	29
Roumania.....	53
Total.....	4,369

In March and April 1941, the freezing regulations were extended to Hungarian, Bulgarian, Yugoslav and Greek assets. In June 1941, they were extended to all other countries of Continental Europe,

<sup>1</sup> Cf. *Federal Reserve Bulletin*, January 1941, page 9.

including Germany and Italy. In the case of such countries as Sweden, Switzerland and the U.S.S.R. the control exercised by the U.S. Treasury Department was relaxed, on certain conditions, through the issue of general licenses.

From the statistics of capital movements compiled by the U.S. Treasury Department—summarized in the accompanying diagram (Diagram 1) and in the quarterly table (Table 4 given below)—, it is clear that the flow of funds to the United States did not come to an end after the outbreak of the war. In the last quarter of 1939, it is true, the flow was interrupted; and this was attributed in part to the exchange restrictions which a great number of countries, including the United Kingdom and France, introduced in September 1939. But in 1940 there was again a sharp increase, almost entirely in banking funds as distinct from security transactions.

In the latter part of 1940, the trend changed once more. Inward movements were offset to an increasing extent by capital exports through the sale of British assets in the United States. With the spread of German control on the Continent of Europe, the scope for further capital movements from that area became restricted. In unoccupied European countries, such as Sweden and Switzerland,

*Table 4. United States: Capital Movements, Balance of Trade, and Imports of Gold.*

\$(000,000's) Quarters:	Inflow or Outflow (—) of Capital							Excess of Merch- andise Exports	Net gold im- ports *
	Increase in foreign bank. funds in U.S.		Decr. in U.S. banking funds abroad	Foreign secur- ities Return of U.S. funds	Dom. secur- ities Inflow of foreign funds	Inflow in broker- age bal- ances	Total		
	Central Bank funds	Other							
1939 I.....	73	249	40	5	—31	16	353	173	721
II.....	114	250	57	18	13	10	462	149	804
III....	127	241	11	12	—24	9	376	242	856
IV....	—10	—39	32	49	—44	—3	—14	295	659
1940 I.....	—3	112	—19	36	—21	8	112	409	761
II.....	383	—92	53	24	—21	10	357	362	1441
III....	190	73	90	8	—47	3	315	315	1254
IV....	89	—29	2	11	—52	—1	20	310	643
1941 I.....	107	—115	—8	9	—40	—5	—52	257	363
II.....	...	...	...	...	...	...	...	244	227

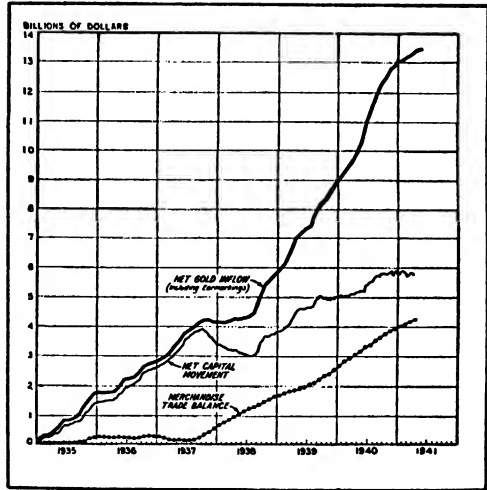
\* After deduction of gold placed under earmark for foreign account in the U.S.

*Diagram 1.*  
*United States: Gold*  
*Imports, Capital Inflow*  
*and Export Surplus.*

Cumulative net movements since the beginning of 1935.

Reproduced from *Survey of Current Business* by permission of U.S. Department of Commerce.

(Sources: Gold Inflow, U.S. Department of Commerce and the Board of Governors of the Federal Reserve System; Capital Movement, U.S. Treasury Department; Trade Balance, U.S. Department of Commerce.)



the fear of an extension of the freezing regulations in the United States caused many holders of dollar balances to repatriate their funds from the United States. Such repatriation, however, did not necessarily reduce the total dollar assets of the countries in question, but often meant simply a transfer of dollar balances from private ownership to the ownership of the central bank. (This transfer is clearly reflected in the first two columns of Table 4.)

The exchange reserve of the Swiss National Bank, for example, rose from 399 million francs in June 1940 to 999 million francs at the end of the year, and further to 1,276 million at the end of May 1941. In the process of acquiring the "repatriated" dollar balances, the Bank lowered the price it was prepared to pay for them in the national currency, and the exchange value of the Swiss franc thus rose slightly from 22.25 U.S. cents in May 1940 to 23.22 at the beginning of 1941.

For 1940 as a whole, Table 4 shows a total capital import of \$800 million. But these data, based on the weekly statistics reported to the U.S. Treasury by banks, brokers and dealers, are incomplete. They do not cover such capital exports as have taken place by private sales of securities in the United States; as was mentioned earlier, dollar securities formerly held in the United Kingdom were often sold direct to investors in the United States. Nor do they cover the capital imports which have taken place in the form of advance payments and capital assistance in connection with British Government orders.

The complete balance of payments of the United States for 1940, reproduced in Chapter VIII below, shows a total recorded capital

import of \$1,403 million. In addition, there was an export surplus of \$1,396 million and a residual item of \$1,432 million representing, in the main, unrecorded capital imports. As a result, gold imports in 1940 surpassed all previous records amounting to \$4,744 million or, after deduction of earmarking transactions, \$4,100 million. Of the total gold imported into the United States in 1940, as much as 76% came from the British Commonwealth.

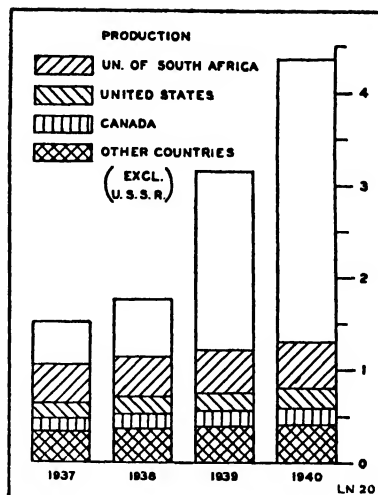
The monetary gold stock of the United States increased from \$17,644 million at the end of 1939 to \$21,995 million at the end of 1940, or by \$4,351 million. Even more than in previous years, the increase in the United States gold reserve exceeded the world's current gold production, and was therefore accompanied by a reduction in gold reserves elsewhere. The world output of gold in 1940 has been estimated at 40.5 million ounces, or (at \$35 per ounce) \$1,417 million, as compared with 38.8 million ounces or \$1,358 million in 1939.<sup>1</sup> But these totals include estimates for the Soviet Union, which are subject to doubt. The production of gold outside the U.S.S.R., as published in the *Federal Reserve Bulletin*, is shown below, together with the separate figures for the four principal producing countries:

\$ (000,000's)	1937	1938	1939	1940
Union of South Africa.....	411	426	449	492
United States.....	168	178	196	207
Canada.....	143	165	178	186
Australia.....	47	54	56	56
Other countries (excl. U.S.S.R.).....	273	313	334	344
World total (excl. U.S.S.R.).....	1,042	1,136	1,213	1,285
Increase in United States monetary gold stock.....	1,503	1,752	3,132	4,351

The difference between the annual production of gold and the annual addition to the gold stock of the United States has greatly increased in recent years, as may be seen from the last two lines of the table. Less than a third of the increase in the United States gold stock in 1940 came out of current production of gold in the world (excluding U.S.S.R.). More than two-thirds thus came from previously accumulated stocks. But a drain of this magnitude on the gold reserves of the rest of the world could not continue indefinitely. At the beginning of 1941, with the British reserve nearly exhausted, and with most European countries subjected to the British blockade and to the freezing regulations of the United States Treasury, there was less scope for further gold imports into the United States in excess of current world production. In fact, as appears from Table 4

<sup>1</sup> Estimates compiled by the Union Corporation Limited, and published in the annual report of Samuel Montagu & Co., London.

*Diagram 2.*  
*Increase in U.S. Gold Stock Com-*  
*pared with Production of Gold.*  
U.S. \$(000,000's)



above, the inflow of gold slowed down appreciably in the first quarter of 1941.<sup>1</sup>

A large part of the difference between current gold production and the increase in the United States gold reserve in 1940 was covered by the drain on the British gold reserve, which amounted to \$1,746 million in the first 16 months of the war. There was undoubtedly a decline also in the Canadian reserve, but its extent cannot be ascertained since the Foreign Exchange Control Board, which publishes no returns, took over the gold from the Bank of Canada in May 1940.

Another country which contributed to the flow of gold to the United States was France. On the eve of the war, France possessed the second-largest gold reserve in the world. The figure of \$2,709 million shown in Table 5 represents the reserve of the Bank of France, and does not include the gold held in the French Exchange Stabilisation Fund, which was last reported at \$477 million in May 1939. As the Fund probably lost most of its gold in the first half of 1940, the decline in the total French gold stock was greater than the reduction in the Bank's reserve alone. According to the Bank's annual report for 1940, the whole of its reserve at the end of 1940 was held outside France (and in all probability outside Continental Europe).<sup>2</sup>

The table below includes only countries whose gold reserve showed significant changes in the period considered. Many countries did not disclose their reserves or showed the same amount during the whole period.

Most of the reduction in the Netherlands gold reserve in 1940 took place in April. Of the gold reserve remaining at the end of the year, a large part was stored outside Europe, as was the case

<sup>1</sup> For a discussion of the various factors pointing to a permanent drop in the rate of gold imports, see *Federal Reserve Bulletin*, May 1941.

<sup>2</sup> Cf. *Neue Zürcher Zeitung*, March 25th, 1941.

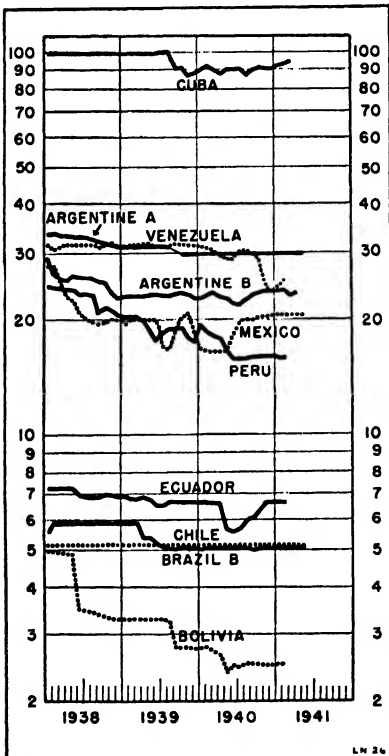
*Table 5. Reported Official Gold Reserves of Certain Countries.*

\$(000,000's)	End of:	Aug. 1939	Dec. 1939	June 1940	Dec. 1940	April 1941
Argentina.....		403	403	403	353	353
France.....		2,709	2,709	2,000	2,000	.
Mexico.....		29	32	31	47	56
Netherlands.....		771	692	625	617	614
Netherlands Indies.....		88	90	98	140	174
Sweden.....		355	308	199	160	174
Switzerland.....		587	549	493	502	528
Union of South Africa.....		222	249	302	367	413
United Kingdom.....		2,038	.	.	292	.
United States.....		16,646	17,644	19,963	21,995	22,506

with most of the other occupied or conquered countries of Continental Europe.

The decline in the gold stock of the Swedish Riksbank in 1940 was accompanied by an increase in the bank's foreign exchange resources. This was true also of the Argentine in the second half of the year; but there is reason to believe that the foreign exchange acquired by the Argentine was mostly in sterling, accumulated on clearing account with the United Kingdom, whereas the gold was used to meet a current deficit in the Argentine's balance of payments with the United States.

But there were also some countries, other than the United States, which gained gold in 1940. The Netherlands Indies gained a large amount of gold as a result of a great and growing demand for tin and rubber on the part of the United States. Mexico gained



*Diagram 3.*

*Latin-American Exchange Rates*  
in U.S. cents per national cur-  
rency unit.

Argentine and Brazil:  
A—official, B—free rates.

some gold as a result of an inflow of capital, and the exchange value of the Mexican peso appreciated by 23% from about 16.65 U.S. cents at the beginning of 1940 to about 20.50 at the beginning of 1941.

In most of the other Latin-American countries the exchange situation deteriorated appreciably. Restrictions on foreign payments were in some cases tightened up, and exchange rates tended to depreciate. Thus Venezuela not only introduced a new and severe system of exchange and import control in October 1940, but also allowed her currency to depreciate (see Diagram 3). Paraguay adopted a stringent control system in March 1941. The Peruvian sol continued to depreciate. In the latter part of 1939, the value of the Cuban peso was reduced by over 10%. In Ecuador, exchange control was reintroduced in June 1940 and further strengthened in October. In the Argentine, the position became increasingly difficult during 1940, and there was a tightening of the exchange and import restrictions in the autumn, when the allocation of exchange permits for imports from the United States was temporarily suspended. The value of the currency was kept unchanged, but the Central Bank lost a large amount of gold in the second half of the year. Under a new set of regulations issued in February 1941, the proceeds of certain Argentine exports which could formerly be negotiated in the free market had to be delivered to the Central Bank. Under the new regulations, foreign exchange for imports of other than "essential" commodities was sold by the Central Bank not at the official rates, but by a system of auction bidding at rates varying for each transaction.

These difficulties were, of course, largely due to the loss of European markets. Moreover, a number of Latin-American countries, including the Argentine, were affected by the bilateral clearing arrangements with the United Kingdom, under which the proceeds of their exports to that country, instead of being available for purchases elsewhere, tended to become blocked.

The situation was relieved, somewhat fortuitously, by the transfer of certain foreign funds from the United States to some of the Latin-American countries owing to anticipations of an extension of the United States freezing regulations. But a more important and significant factor was the financial assistance accorded to these countries by the United States. Especially in the second half of 1940, the Government-controlled Export-Import Bank of the United States granted a number of loans to Latin-American countries in the form of dollar exchange credits to central banks or loans for industrial development. Of the former kind of credits, \$60 million was granted to the Central Bank of the Argentine, \$25 million to the Bank of

Brazil, \$10 million to Colombian Bank of the Republic, and \$10 million to the Central Reserve Bank of Peru. The chief examples of the latter kind were a \$20 million loan to establish a steel industry in Brazil and a \$12 million loan for the construction of electric power plants in Chile. At the end of March 1941, most of these credits had not yet been drawn upon. The total of Export-Import Bank loans to Latin-American countries rose from \$19 million on December 31st, 1939 to \$34 million on March 31st, 1941. At the latter date, the Bank showed "commitments to make additional loans" amounting, in the case of Latin America, to \$187 million.<sup>1</sup>

### CHINESE EXCHANGE PROBLEMS.

Of all the countries which by the end of March 1941 had received assistance from the U.S. Export-Import Bank, China had received by far the largest amount (\$81 million), equalling nearly one-half of the total loans outstanding on that date (\$166 million). The outstanding amount of Export-Import Bank loans to China increased by \$56 million during 1940 and the first quarter of 1941; and another \$40 million had been granted but not yet utilized on March 31st, 1941.

Furthermore, an agreement was announced on April 25th, 1941, whereby the Stabilization Fund of the United States Treasury granted \$50 million for the purpose of stabilizing the value of the Chinese currency in relation to the dollar. This sum, supplemented by the dollar resources of the Chinese Government banks, amounting to \$20 million, was allocated to a Chinese fund charged with the stabilization of the exchange. At the same time, the British Treasury made £5 million available for supporting the Chinese yuan in terms of sterling. The Chinese Government set up a board, including representatives of the British and United States Treasuries, to administer these resources.

This was the continuation of a policy which had been started two years earlier. In April 1939, an Anglo-Chinese Exchange Stabilization Fund was set up with a capital of £10 million, of which half was supplied by a British banking group and half by the Chinese Government banks. Its function was to support the value of the yuan on the free exchange market in Shanghai. As it was not possible under the system of exchange restrictions adopted in March 1938 to enforce a strict control of export proceeds, the free market was of considerable importance. Uncontrolled exports (especially from occupied areas), emigrants' remittances and foreigners' expenditures

<sup>1</sup> For the detailed figures, see *Federal Reserve Bulletin*, May 1941, page 386. For a further discussion of these credits, with particular reference to international trade, see Chapter VIII, page 234, below.



were among the principal sources of supply on that market, while the demand came largely from the flight of domestic capital and from Japanese purchases of foreign exchange with Chinese currency obtained in the occupied areas.<sup>1</sup>

At the time of the establishment of the Exchange Stabilization Fund the free market value of the yuan was about 16 U.S. cents (compared with an official nominal rate of 29.5 cents). The Fund was faced with serious pressure soon after its establishment. In May 1939 the Japanese set up the "Hua Hsing Commercial Bank" to issue notes and replace Chinese currency in Central China, following the example of the Japanese-sponsored Federal Reserve Bank in North China. This caused anticipations of a further increase in demand for foreign exchange. Moreover, the war finance of the Chinese National Government was resulting in a steady expansion of the currency and a progressive rise in prices, which stimulated imports and discouraged exports.

In these circumstances, the Exchange Stabilization Fund withdrew its support in June, and the rate dropped to about 6 U.S. cents in August.

A more stringent control of trade and exchange was instituted at the beginning of July 1939. Imports were made subject to licensing, and an Exchange Examination Committee was set up at Chungking to supervise the allocation of exchange. Exports of wood oil, tea, bristles and mineral products were made a Government monopoly. Exporters of other goods were required to sell their proceeds to the Government banks; but the payment they received from the banks in domestic currency was not calculated at the official rates, but, in order to stimulate exports, at rates corresponding closely to those quoted on the free market.

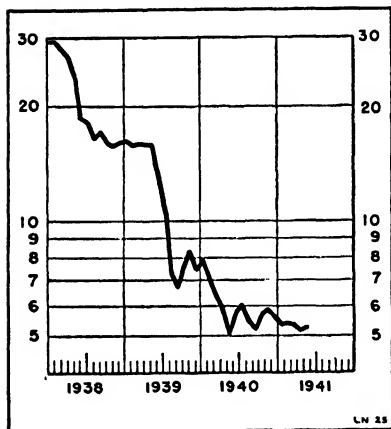
As a result of this tightening of control and, more especially, of some repatriation of capital following the outbreak of war in Europe, there was a substantial improvement in the autumn and winter of 1939/40, and the Fund was able to repurchase some of the exchange it had sold previously.

In the spring of 1940, conditions became unfavourable once more, and the Exchange Stabilization Fund withdrew from the market in May. One of the factors responsible for the renewed pressure on the national currency was the establishment of a Japanese puppet government at Nanking, a government which announced its intention to set up a note-issuing bank of its own. This bank, under the name of "Central Reserve Bank," started operations at the beginning of

<sup>1</sup> The Sino-Japanese "currency war" began early in 1938, when the Japanese established the so-called Federal Reserve Bank in North China and began to withdraw Chinese notes from circulation, replacing them with the notes of this bank.

January 1941. Its object was essentially the same as that of the "Federal Reserve Bank" of North China; but the scope left to it was restricted in view of the large amounts of Japanese military notes (roughly estimated at 600 million yen) which the army of occupation had already put into circulation.<sup>1</sup>

From May 1940 to the introduction of the new stabilization procedure in April 1941, the exchange appears to have received little if any support from the Fund. The virtual suspension of the Fund's activity was largely due to the fact that the exchange market at Shanghai had come to be used to an increasing extent for purposes which the Fund was unwilling to support, namely, flight of domestic Chinese capital and purchases of foreign exchange by the Japanese.



*Diagram 4.*  
*Value of Chinese Yuan in U.S.*  
*Cents.*

There exist no comprehensive data concerning the movement of capital from China. But the statistics of the United States Treasury show, for 1939, a net capital inflow from the "Far East" to the United States, amounting to \$143 million; and it may be observed

that by 1939 exchange control in Japan had become sufficiently severe to prevent any large private exports of capital from that country. More recently, the U.S. Treasury has published separate figures for Chinese short-term assets in the United States; and it appears that these increased from \$167 million at the beginning of 1940 to \$218 million at the end of February 1941.

It is even more difficult to judge the extent to which the free market in Shanghai has been used by the Japanese for purchases of dollars with the Chinese notes withdrawn from the occupied territories. In June 1940, the note issue of the Federal Reserve Bank in North China amounted to 560 million yuan. The amount of Japanese military notes circulating mainly in Central China has been estimated at 600 million yen.<sup>2</sup> But it cannot be assumed that the Japanese were able to with-

<sup>1</sup> The note issue of the "Hua Hsing Commercial Bank" mentioned above proved of minor importance, amounting to only a few million yen.

<sup>2</sup> *Foreign Commerce Weekly*, October 26th, 1940.

draw an equivalent amount of Chinese yuan notes from circulation. The Federal Reserve and military notes constituted in large part simply an addition to the total volume of currency.

The outflow of Chinese capital and the utilization of Chinese currency by the invader for purchases of foreign exchange might have been stopped by a rigorous system of exchange restrictions. But the enforcement of exchange control has met certain special difficulties in China. The country's principal exchange market—Shanghai—has been largely outside the jurisdiction of the Chinese Government, owing to the system of concessions and the extra-territorial privileges of foreign banks. In the regions occupied by the Japanese or subject to Japanese military interference, the Chinese Government has frequently lacked the means to enforce its regulations. On the other hand, the establishment of a strict exchange control confined to the "Free China" of the interior has been regarded by many as impracticable or even undesirable: impracticable because of administrative and geographical difficulties and undesirable because of the breach it would mean in the unified national monetary system successfully introduced in 1935, a breach resulting possibly in the abandonment of the national currency in the occupied areas. A great deal of public discussion has been devoted to these questions in China. The actual tendency seems to have been towards the creation of a closely regulated exchange market centred in the interior. Thus in 1940 the head offices of certain banks controlled by the National Government were transferred from Hongkong to Chungking. Early in 1941, the Shanghai branches of the Government banks were closed. The formation in 1939 of an Exchange Examination Committee in Chungking was mentioned earlier. Regulations were issued in 1940 requiring special permits for all remittances from the interior to Shanghai or the occupied areas; and these permits were to be granted by a "Committee for the Control of Internal Remittances" only for the purchase of essential commodities.

But this strengthening of control was not by any means sufficient to eliminate the free market; and for at least two reasons it seemed advisable to provide official funds to support that market, even at the risk of facilitating to some extent the transfer of flight capital or the conversion of Japanese holdings of Chinese currency. In the first place, it was partly the very existence of a free market, and of the possibility of conversion which it implied, that rendered the population of the occupied areas reluctant to give up their Chinese currency in exchange for the inconvertible currencies introduced by the Japanese. It is reported that even in North China large amounts of Chinese notes remain in circulation, or rather in hiding, in spite of the pen-

alties and prohibitions decreed by the Japanese authorities.<sup>1</sup> Secondly, the existence of a reasonably stable exchange market has tended to support the whole system of internal Government finance in unoccupied China. It has helped to maintain a certain confidence in the currency and to check the flight into commodities on the part of the public; and it has thus been of considerable importance for the success of the inflationary methods of war finance on which the Chinese Government has largely had to rely.

### EUROPEAN CURRENCIES UNDER GERMAN CONTROL

As was said in the introductory part of this chapter, Germany—in contrast to the United Kingdom—lacked the means for any comprehensive policy of “external war finance”. But her military campaigns, particularly those of the spring of 1940, put her in a position to acquire goods and services from other countries without having to provide a corresponding amount of goods and services in return. This was true to some extent even in her relations with some of the remaining free countries within her reach, as a result of the increased pressure to which these were subjected. In the conquered or occupied countries, goods and services were appropriated largely by requisition, levies and other means derived from the fact of military domination.<sup>2</sup> The financial forms in which some of these impositions were effected fell into three main groups: (1) issues of new currency; (2) tributes for occupation costs; (3) payments through clearing accounts.

The issue of new currency notes was intended as a temporary expedient. The Germans wanted to prevent the circulation of ordinary reichsmark notes in the occupied areas, in order to prevent an increase in the note issue of the Reichsbank. On the other hand, in the process of the military operations the local banking institutions were evacuated or disorganized. The army authorities therefore set up their own note-issuing institutions called Reich Credit Offices (*Reichskreditkassen*). These offices were authorized to make commercial loans and discounts, but their principal function was simply to provide the army with all the money it required for local purchases, requisitions and other purposes. The new currency notes, called *Reichskreditkassenscheine* or “credit notes,” were declared unlimited legal tender within each of the occupied countries in which they were issued. They were denominated in reichsmark, but were otherwise quite distinct from the currency circulating in Germany.

<sup>1</sup> See, e.g., *Far East Bulletin*, January 1st, 1941.

<sup>2</sup> Apart from straightforward confiscation, the control of ownership of factories, trading firms, land and buildings frequently passed into German hands through anti-Jewish legislation, enforced bankruptcy and various forms of indirect pressure.

In the territories occupied but not formally annexed, the "credit notes" thus came to circulate side by side with the national currencies, and official rates of exchange were fixed between the two. In the territories incorporated into the Reich—Danzig and Western Poland, Eupen and Malmédy, Luxemburg, Alsace and Lorraine—both the former local currencies and the newly issued credit notes were soon withdrawn from circulation and replaced by the currency of the Reich.

In the areas which were not incorporated, the dual system of currency thus set up did not remain long in operation. The credit notes were gradually withdrawn. In Poland (*i.e.*, the part of Poland constituting the so-called General Government), they were exchanged for new zloty notes issued by the new "Bank of Issue in Poland".<sup>1</sup> In Denmark, Norway, the Netherlands, Belgium and occupied France, they were gradually collected at the national central bank, and set against the tributes these countries had to pay or the credits they had to advance to cover the costs of occupation. The issue of new credit notes was stopped. Whether by tribute or by credit, the German army authorities obtained any desired quantities of currency from the national central banks, and all local expenditures of the Germans came to be made with the national currency of the occupied country. In the spring of 1941, occupied France appeared to have been the only area where substantial amounts of credit notes still remained in the hands of the public; and even there they were being retired as and when they passed into the banking system. But the amounts outstanding there or elsewhere are not known even approximately. No figures have ever been published on these German note issues.<sup>2</sup>

To the extent that the German credit notes remained in circulation, they constituted an independent means of financing. To the extent that they were later withdrawn and used for the settlement of occupation charges, their issue represented merely a draft upon these charges and was not an independent means of financing. Before turning to a survey of these various charges—the tributes and credits constituting the second principal form of German financing in the occupied countries—it may be useful to set out the exchange rates fixed and to consider certain related monetary measures taken by the Germans in these territories.

<sup>1</sup> See *Money and Banking, 1939/40*, Vol. I (*Monetary Review*), pages 69 ff.: Supplementary Note on Currency Measures in Czecho-Slovakia, Danzig and Poland.

<sup>2</sup> In occupied France, according to the *Neue Zürcher Zeitung* of October 22nd, 1940, the Reich credit notes constituted, in the autumn of 1940, a larger proportion of the total circulation than the note of the Bank of France.

In the following table, covering also the pre-war annexations, the rates fixed between the reichsmark and the local currencies after the occupation are compared with the rates previously in force. There was not a single case in which the rate was left unchanged. The last column of the table shows the percentage decrease or increase effected in the value of the mark in terms of these various currencies.

*Table 6. Rates of Exchange between Germany and Occupied Territories.*

(Local currency units to the Reichsmark.)

	Date of Change	Previous Official Rate	New Rate	Percentage Change
Austria (Schilling).....	III. 1938	2.18	1.50	— 30%
"Sudeten" District (Koruna).....	X. 1936	11.72	8.34	— 29%
"Bohemia & Moravia" (Koruna)...	III. 1939	11.72	10.00	— 15%
Memel (Lit).....	III. 1939	2.38	2.50	— 5%
Danzig (Gulden).....	IX. 1939	2.13	1.43	— 33%
Poland (Zloty).....	IX. 1939	2.13	2.00	— 6%
Denmark (Krone).....	IV. 1940	2.08	2.00	— 4%
Norway (Krone).....	IV. 1940	1.76	1.67	— 5%
Netherlands (Guilder).....	V. 1940	0.76	0.67	— 12%
	VII. 1940	0.76	0.75	— 1%
Belgium (Belga).....	V. 1940	2.38	2.00	— 16%
	VII. 1940	2.38	2.50	+ 5%
Luxemburg (Franc).....	V. 1940	9.52	8.00	— 15%
	VII. 1940	9.52	10.00	+ 5%
France (Franc).....	VI. 1940	17.60	20.00	+ 14%

In the case of Austria, the Sudeten Territory, Memel, Danzig and Luxemburg, the rates of exchange fixed after the occupation were the rates at which the local currencies were called in and replaced by reichsmark currency. The same is true of certain parts of Poland, Belgium and France, mentioned earlier. The various areas received very different treatment. The withdrawal of the Austrian currency, for example, was effected at a rate which placed a relatively high value on the schilling and a low one on the reichsmark, in comparison with the previous official parity. In other words, allowance was made in this case for the artificial overvaluation of the mark.<sup>1</sup> The same was done in the Sudeten district, the exchange value of the mark being placed 29% below the former parity; while in the case of "Bohemia and Moravia" only a 15% reduction was conceded. The population

<sup>1</sup> The overvaluation of the mark meant that prices, if calculated at the official rates of exchange, were higher in Germany than in other countries. When no allowance was made for this in the rates fixed in the occupied countries (when the rates were left more or less the same, or when, as in the case of Belgium and France, the overvaluation was increased still further), the result was that a given amount of marks spent by the Germans in the occupied territories purchased much more in terms of foodstuffs, armaments, services, etc., than the same amount spent in Germany.

of Danzig received a relatively favourable rate in terms of marks for the local currency they had to surrender. This currency, the gulden, had previously been at par with the Polish zloty. But the rate at which the zloty notes were absorbed in the incorporated areas of Western Poland was quite different and much less favourable to the local population.

It will be observed from the table that in the Netherlands, Belgium and Luxemburg the rates of exchange, placing at first a discount of 12% to 16% on the reichsmark, were later altered so as to bring them back practically to the official parity, as in the Netherlands, or even to raise the mark above that parity, as in Belgium and Luxemburg. In Eupen and Malmédy, the local currency was withdrawn at the rate fixed in May, and in Luxemburg, at the rate fixed in July 1940.<sup>1</sup>

The new rates fixed in the occupied but unincorporated areas, shown in the table, were the rates at which the German notes were to be valued in relation to the local currency. In Denmark and Norway, they were nothing else; they were adopted merely for convenience of calculation;<sup>2</sup> and they became ineffective in practice as soon as the credit notes were withdrawn. The previous official reichsmark parities with Denmark and Norway were left unchanged and continued to operate for clearing purposes.

In "Bohemia and Moravia", the Germans issued no credit notes; the notes of the Reichsbank itself were declared legal tender and were introduced into circulation alongside the local currency at a rate of 10 crowns to the mark. This rate was also applied in the clearing with Germany. But in relation to all other currencies, the crown retained its former official value, corresponding to 11.72 crowns to the mark. It was only in October 1940, when the "Protectorate" was incorporated in the German Customs area, and when all exchange restrictions between it and Germany were abolished, that the official value of the crown in terms of all other currencies was raised (by nearly 15%) to the level of 10 crowns to the mark. Before that date, the "Protectorate" crown had been at par with the Slovak crown; thereafter, it was equivalent to 1.17 Slovak crowns.

<sup>1</sup> The rate at which the French currency was withdrawn in Alsace-Lorraine was the same as that for France in general, namely, 20 francs to the mark. The failure to grant a more favourable rate for the exchange of currencies in the incorporated provinces was explained on the grounds that the population had been evacuated and that its return required some time. However, by way of compensation, wage rates were immediately raised by 80%; rents were increased by 50%; and while prices of meat, for instance, were raised to the level of the Reich, those of bread and cereals underwent a smaller increase.

<sup>2</sup> Norwegian Krone = RM 0.60 and 1 Danish Krone = RM 0.50, as compared with official rates of RM 0.57 and 0.48, respectively.

The new reichsmark rates fixed in the Netherlands, Belgium and France were applied, as in the "Protectorate", not only to the interchange of currency notes, but to all transactions, including the clearing, between these countries and Germany. With the inclusion of the Netherlands in the German Customs area, the exchange control between the Netherlands and Germany was extensively relaxed on November 1st, 1940, and completely abolished on April 1st, 1941 (except for a transfer tax on the repatriation of Dutch capital from Germany, which had been imposed in November 1940). Accordingly, the Dutch-German clearing account was closed on April 1st, 1941.<sup>1</sup> With the exception of the Netherlands and the "Protectorate", the unincorporated occupied areas retained their local exchange controls, even though the regulations tended to be progressively assimilated to the German model.

The new reichsmark rate fixed in Belgium in July 1940, namely, 2.50 belgas to the mark, was applied to the clearing established in the same month. The rate was 5% above the pre-invasion parity, so that the overvaluation of the mark which existed at the old rate was still further increased. But the sharpest treatment in this respect was reserved for France, where the value of the reichsmark in all transactions with the Reich (including the clearing instituted in November 1940) was raised 14% above the former official parity of 17.6 francs to the mark.<sup>2</sup> Relatively to an important "neutral" currency such as the U.S. dollar, the reichsmark was already grossly overvalued; but, relatively to the same standard—the U.S. dollar—the French franc, even at the official parity, was probably undervalued.<sup>3</sup> According to a German source (the *Bank-Archiv* of September 15th, 1940), the equilibrium rate or purchasing power parity between the French franc and the reichsmark was therefore estimated to be in the neighbourhood of 10 francs to the mark. A rate of 20 francs to the mark meant that the mark bought twice as much in France as in

<sup>1</sup> To prevent the currency of either country from circulating extensively on the territory of the other, arrangements were made whereby the banks in each country agreed to return to the other country any of its currency handed to them for conversion into local currency. This exchange of currency notes was to take place through the central banks.

<sup>2</sup> In September 1939, the French currency was officially fixed at a level of 44 francs to the United States dollar. In Germany, the official value of the dollar was, and continues to be, 2.50 reichsmarks. The cross-rate between these two rates is 17.6 francs to the mark.

<sup>3</sup> The purchasing power parity of the reichsmark was probably between 3.60 and 4.00 marks to the U.S. dollar, as against the official rate of 2.50. (In the annual report of the "Reichskreditgesellschaft," according to the *Frankfurter Zeitung* of February 6th, 1941, the probable purchasing power parity in September 1940 was placed even higher, namely, at about 4.15 marks to the dollar.) The equilibrium rate of the French franc, on the other hand, was probably somewhere between 36 and 40 francs to the dollar, as against the official rate of 44. The cross-rate between the two equilibrium rates, obviously, works out at around 10 francs to the mark.



Germany. Needless to say, this created a powerful incentive for German purchases in France—civilian as well as military and other official purchases, private purchases by members of the army, etc. The monetary means for such purchases were at Germany's disposal in the form of her own *Reichskreditkassenscheine*; the clearing arrangement introduced in November 1940 provided the facilities for commercial imports from France; and above all, the tribute which Germany imposed by the Armistice of July 22nd, 1940 supplied her with practically unlimited means of payment in terms of francs.

This tribute was ostensibly a charge for the costs of occupation; but in fact it bore little relation to the actual expenditure of the German troops in France. The tribute was fixed at 400 million francs per day (or 146,000 million per year), and it was financed exclusively by an advance from the Bank of France. This advance, starting at 50,000 million in August, was raised by several stages until it reached 100,000 million francs in March 1941. Out of this fund the Germans paid not only for their strictly military expenditures but also for various other purchases in France; and it is known that they bought not only movable goods but also capital assets, including real estate and shares in French enterprises. Even so, the amount of the tribute was so high that they could not use up the whole of it. According to the annual report of the Bank of France, the advance for occupation costs, that is, the payment that had been made to the Germans, amounted to 72,317 million francs at the end of 1940. But of this, 41,400 millions francs was still unused on deposit at the Bank of France, representing a slight liability of the Bank to the German authorities. This means that the Germans had been able to spend only about 31,000 million francs or 43% of the tribute during the second half of 1940. Even this amount, corresponding to an annual rate of some 62,000 million francs, was, of course, enormous.<sup>1</sup> That the Germans did not spend more was due undoubtedly to the lack of suitable objects of expenditure rather than to any other reason. The purely inflationary character of this spending requires no emphasis. The note circulation of the Bank of France—excluding the German credit notes—was 218,000 million francs at the end of 1940 as against 151,000 million at the end of 1939 and 156,000 million at the end of April 1940.<sup>2</sup> The unspent portion of the tribute

<sup>1</sup> At 44 francs to the U.S. dollar, the sum of 62,000 million francs was equivalent to over \$1,400 million. It may be mentioned for purposes of comparison that the total ordinary budget receipts of the French Republic amounted to 54,250 million francs in 1938 and to 63,650 million in 1939.

<sup>2</sup> The other important source of inflation was, of course, the increase in the Bank's advances to cover the French Government's expenditure. Government advances under this head increased from 20,900 million francs at the end of April to 63,900 million at the end of December 1940.

was not by any means cancelled, but has been retained by the Germans as a claim that can be made use of at any time in the future.

In the other occupied countries the system has been essentially similar, but the position as regards the amounts involved and the method of payment is somewhat less clear than in the French case. In March 1941 the following figures were made public from British Government sources, showing the annual rate of payment made by five countries for the cost of occupation. The figures were given in pounds sterling at pre-war exchange rates. The second column in the table below shows them in terms of the national currencies calculated at these rates, and the third in terms of reichsmark at the new rates fixed after the occupation :

	£ sterling (at pre-war rates)	National currencies (000,000's omitted)	Reichsmark (at new rates)
France.....	827	146,000	7,300
Belgium.....	75	2,062	825
Netherlands.....	54	475	630
Denmark.....	26	582	280
Norway.....	68	1,353	810
Total.....	1,050		9,845

The figure for the Netherlands is subject to reserve. There is little doubt that the actual amount was larger; but only part of it was reflected in the balance-sheet of the central bank. The tribute formed part of the general expenditure of the Government at the Hague, and there was no particular item of borrowing or revenue that was earmarked to it. In April 1941 (that is, after the publication of the figures just quoted) an analysis of State expenditure was published in the Netherlands press.<sup>1</sup> According to this, there was a current expenditure of some 900 to 1,000 million guilders per year; expenditure on public works and reconstruction, amounting to 200 million; and costs of occupation and expenditure for the German civil administration amounting to 1,200 million guilders a year, equivalent to £136 million at the pre-war rate of exchange and 1,600 million reichsmark at the new rate. In addition, the statement referred to "advances to Germany" amounting to 1,400 million guilders a year, representing German Government orders placed in the Netherlands and financed by the Treasury at The Hague, remittances of Dutch workmen employed in Germany, and interest payments due from Dutch investments in Germany. Some of these advances appear to have been

<sup>1</sup> See *Neue Zürcher Zeitung*, April 16th, 1941.

financed directly by the Netherlands Bank and included under "other assets", an item which increased from 21 million guilders on May 6th, 1940 to 230 million guilders on April 7th, 1941. During the same period, Treasury bills held by the Bank increased by 201 million guilders; and the note circulation rose from 1,158 to 1,592 million guilders or by practically 40%.

Denmark, which did not resist the German forces, did not apparently have to pay for the expenses of occupation. But in substance, the position was the same as in the other occupied areas. The Danish National Bank had to make advances to the German authorities to cover all their expenditures in Denmark. In the monthly return of the Bank these advances were included in "other assets"; and this item increased from 98 million kroner at the end of March 1940 to 610 million at the end of March 1941. This increase accords approximately with the annual estimate reproduced in the table above. But this is not all. Germany has made extraordinarily large purchases on clearing account.<sup>1</sup> The frozen clearing balances accumulated by the Danish National Bank, almost exclusively in the clearing with Germany, thus rose from zero at the end of March 1940 to 485 million kroner at the end of March 1941, that is, by almost as much as "other assets". This could not be entirely attributed to the overvaluation of the reichsmark at the official rate of conversion. This rate had been in force before the occupation but, owing to the means of control which were then at Denmark's disposal, had not resulted in any abnormal accumulation of clearing claims.<sup>2</sup> The fact of occupation, rather than the rate of exchange, was evidently of primary significance. Nevertheless, efforts have been made in Denmark to obtain a reduction in the clearing rate from 2.08 kroner per reichsmark to, say, 1.50 kroner to the mark, so as to restrain the advance in commodity prices and the expansion of currency resulting from the high reichsmark rate and from the accumulation of clearing balances in the central bank. Suggestions to that effect were made, *inter alia*, by the central bank in its annual report for 1940. But the German authorities were opposed to a change in the rate and no change was made.

In making use of clearings as a means of obtaining an excess of imports from other countries, it has been a consistent policy of Germany to set a high value on the reichsmark in the clearing agreements concluded by her. The overvaluation of the mark, under the normal working of the price mechanism, has tended to stimulate the flow of

<sup>1</sup> Cf. Chapter VIII, pages 237 ff., where Germany's trade through clearing accounts is more fully discussed.

<sup>2</sup> According to the annual report of the National Bank, Denmark had, indeed, a clearing *debt* of 56 million kroner at the end of 1939.

goods to Germany and to discourage the movement of goods out of Germany. Germany continued in 1940 to press for increases in the value of the reichsmark in negotiations with her clearing partners. Such increases were carried out in a number of cases.

Thus, in August 1940, the National Bank of Bulgaria agreed to purchase the entire reichsmark proceeds of Bulgarian exporters at the official rate. Previously it had purchased only a certain quota, the remainder having to be sold on the free market at discounts varying from 3% to 9%. At the same time, the premium which the Bank had been paying on free currencies was lowered from 35% to 25%.

In Germany's clearing with Yugoslavia, the conversion rate was raised on October 1st, 1940 from 14.80 to 17.82 dinars to the mark.

In Hungary, the premia paid by the National Bank on free currencies were lowered in November from 50% and 53% (for purchases and sales, respectively) to 47% and 50%, while the premium on reichsmarks was raised from 18-19½% to 21-22½%.

Under an agreement signed in December 1940, the National Bank of Roumania increased its buying and selling rates for the reichsmark from 49 and 50 lei respectively to 59 and 60 lei to the mark as from April 1st, 1941.

The actual working of Germany's clearing agreements and trade relations with countries of South-Eastern Europe is described in Chapter VIII. Here it need only be added that the adjustments in the exchange rates just mentioned were designed not only to force up the official exchange value of the reichsmark but also to equalize that value as between the different countries. Formerly, Germany's exchange relationships with these countries had developed on a strictly bilateral basis, and the ratio between the value of the reichsmark and the value of an important "free" currency such as the dollar became frequently quite different in the different countries. So long as the clearings were purely bilateral, this inequality in the dollar value of the mark was of no particular consequence to Germany. But in the summer of 1940, various pronouncements were made in Germany in favour of a multilateral European clearing system centered in Berlin.<sup>1</sup> For such a multilateral clearing, however, it was obviously necessary to have a system of exchange rates which was arithmetically consistent. The adjustments made in the autumn of 1940 were designed to achieve this mutual consistency of rates. The discount at which the clearing value of the mark stood in these countries in terms of the dollar was now established at a uniform level of 20%.

<sup>1</sup> Cf. the speech made by W. Funk on July 24th, 1940.

Yet the multilateral clearing system sponsored by Germany made no substantial progress. Only between occupied countries *inter se*, and between occupied countries on the one hand and certain unoccupied countries on the other, were payments cleared through Berlin. There was no instance in which two unoccupied countries agreed to settle their mutual payments through the intermediary of the German clearing office.<sup>1</sup>

<sup>1</sup> For further details on this, see Chapter VIII.

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## CHAPTER VI

### RAW MATERIALS AND FOODSTUFFS

#### PRODUCTION

Raw material and foodstuff production during the war should be viewed against the pre-war background, the salient features of which may be judged from the League of Nations indices of world production and stocks of primary commodities.<sup>1</sup>

By 1937, the peak year of the upward swing that began in 1932/33, the volume of primary goods produced in the world as a whole had risen at least 25% above the 1920 level, and at least 10% above the 1929 peak. Primary commodity stocks, on the other hand, which were greatly swollen during the depression of the early thirties, had fallen by 1937 below their 1929 average.

The advance in production since 1929 had been particularly rapid in Oceania, Africa and the U.S.S.R. and fairly rapid also in Latin America and Asia;<sup>2</sup> in Europe it was more moderate and production in North America had only risen by a few per cent.

The industrial recession of 1938, particularly marked in North America, caused no great reduction in world primary production as a whole. Foodstuff production was in fact unaffected and rose another step above its previous high level, while the output of industrial raw materials followed more closely the course of manufacturing activity. Thus raw material production dropped heavily in North America and contracted considerably also in Africa and Asia, but was fairly well maintained in Europe and Latin America and continued to rise in Oceania and the U.S.S.R.

Visible stocks of primary goods had ceased contracting in the spring of 1937, thus foreboding the recession just mentioned, and began to rise at a rapid rate in the latter part of that year. The rise was less precipitate but more persistent for foodstuffs than for industrial raw materials. By the end of 1938 the stocks of foodstuffs had again reached their level of December 1929. The visible stocks of

<sup>1</sup> The evidence afforded by these indices was analysed in the annual League publication, *World Production and Prices* (publication suspended during the war), and summarized in previous editions of the *World Economic Survey*.

<sup>2</sup> The U.S.S.R. being treated throughout this chapter as a continental group of its own, both Europe and Asia are considered exclusive of Russian territory.

industrial raw materials (in the hands of producers and dealers, in public warehouses and "afloat"), which by the middle of 1938 reached a point some 14% above the 1929 average, had fallen again below that average by the middle of 1939 as a result, no doubt, of shifts to unrecorded Government stocks and stocks with manufacturers which were then being increased (at any rate in Europe) against the risk of war.

Such was in broad outline the situation prior to the outbreak of this war. Owing to the partial "black-out" of economic statistics to which most belligerent and also a number of other countries, particularly in Europe, have resorted since the autumn of 1939, it has become increasingly difficult to measure the changes in the total supply of certain commodities, more especially those of non-agricultural origin. While the data for 1939 were still on the whole nearly as complete as those for earlier years, the more restricted information made available regarding 1940 is less precise in many cases and necessitates recourse to appraisal to a greater extent than formerly. Even in Europe, however, official agricultural statistics for 1940 have been published by a number of countries; for the others the International Institute of Agriculture and the U.S. Department of Agriculture have published estimates which are in substantial agreement. This information, together with the more complete data for other continents, renders it possible to determine roughly the direction and approximate range of the changes in the output of foodstuffs and agricultural raw materials in that year. The production data for 1940 relating to non-agricultural raw materials are too incomplete to permit of a continuation of the general indices into that year except for the Western Hemisphere.

Developments in 1939 and 1940 in so far as they can be statistically traced are summarized in the tables that follow.<sup>1</sup>

<sup>1</sup> *Observations regarding the nature of the indices:* The last full pre-war year, 1938, has been taken as base (= 100) for the indices. In order to provide at least some pre-war perspective, figures are also shown for 1936 and 1937 in most of the tables.

The scope of the indices is the same as in the past with one exception. Gold production, previously excluded on the ground that it served monetary rather than raw-material purposes, has now been taken into account. Gold does in fact form part of the physical wealth produced and constitutes an important proportion of the exports of many countries or territories. In classifying total primary production according to use, gold and silver have been aggregated in a special group, however, distinct from those comprising foodstuffs and raw materials proper. The general indices are calculated both including and excluding gold and silver. Silver, which was previously included under raw materials, has in the years covered by the present calculations mainly served monetary reserve purposes, most of the current world production (in addition to large amounts of "old" silver) being bought by the

Table 1—World Indices of Primary Production

1938=100

	1936	1937	1938	1939
A. Foodstuffs <sup>1</sup> .....	94	99	100	101 <sup>5</sup>
B. Raw materials.....	99	111	100	107
Total, A + B.....	95	102	100	103
C. Gold and Silver.....	89	95	100	104 <sup>5</sup>
Grand Total, A + B + C.....	95	102	100	103
<i>Thereof:</i>				
<i>Agricultural products</i> <sup>1 2</sup> .....	95	100	100	101 <sup>5</sup>
<i>Non-agricultural products</i> <sup>3</sup> .....	96	108	100	108
D. Fodder cereals <sup>4</sup> .....	83	103	100	105 <sup>5</sup>

<sup>1</sup> Excluding fodder cereals given under D.

<sup>2</sup> Foodstuffs and raw materials of agricultural origin.

<sup>3</sup> Raw materials derived from forests and products of mineral origin, including gold and silver.

<sup>4</sup> Cereals mainly used as fodder, excluded from the totals in order to avoid double counting with the animal foodstuffs largely "derived" from such cereals.

<sup>5</sup> Tentative calculations on the basis of such information as is available for 1940 suggest that, compared with 1939, the production of foodstuffs and fodder cereals declined by a few per cent and total agricultural production (including certain raw materials) somewhat less while gold production rose by some 6%.

As will be seen from Table 1, the slow rise in foodstuff production continued in 1939<sup>1</sup>, while the output of industrial raw materials and particularly those of non-agricultural origin recovered very rapidly as armament demands grew before and after the outbreak of the war. Non-agricultural production in the world as a whole again reached the high mark of 1937. Since the outbreak of the war, however, the world figures have lost much of their significance except for purposes of comparison. Greater interest attaches today to the developments in each of the continental and other significant groups shown in Table 2 and subsequent tables considered severally.

Government of the United States under the silver purchase programme of that country.

As previously the value aggregates on which the indices are based have been calculated in terms of 1930 prices. Had they been expressed instead in terms of 1938 prices, this would not have appreciably changed the general picture presented by the indices, as the relative change in average prices between 1930 and 1938 was fairly similar for the foodstuff and raw-material groups. Even if gold (the dollar price of which stood 69% higher in 1938 than in 1930) had been counted at the 1938 price, this would only have affected the general world index to the extent of a fraction of 1% despite the fact that the output of gold rose much more rapidly than that of raw materials and foodstuffs during the period under review.

<sup>1</sup> It should be noted that, as far as crops in the Southern Hemisphere are concerned, the twelve-months periods covered by the indices extend from the middle of each year shown in the table headings to the middle of the following year. Thus to the Northern Hemisphere crops of 1939 and 1940 are added those for 1939/40 and 1940/41 of the Southern Hemisphere.



Continental Europe was before the war and still is by far the largest producer of foodstuffs, though not per head of the population.<sup>1</sup> Although it had become largely self-sufficient in food as a result of the agricultural policy pursued for nearly a decade it still depended to a considerable extent upon imports of feeding stuffs (raw materials for its own production of animal food) and to some extent also upon food imports from overseas.<sup>2</sup> But a very substantial part of the food consumed in the United Kingdom before the war came from abroad.

According to such reports as are available, the food production of the British Isles rose appreciably in 1940 and during this year the United Kingdom imports of bread cereals were more than maintained and those of meat but little lower than in 1938. In Continental Europe, on the other hand, whose food and fodder imports from overseas were greatly curtailed as from September 1939 and virtually ceased by the middle of 1940, the food production is estimated to have dropped considerably.<sup>3</sup> This drop will be considered in further detail below. Such estimates as are available point to a comparatively favourable foodstuff situation in the Soviet Union in 1940.

In North America the food production in 1940 was the largest on record while in Asia and Oceania it was a little lower than in 1938 and in Africa and Latin America about the same as in that year.

The summary picture of raw-material production afforded by Table 2 is rendered clearer if we distinguish, as in Table 3, between raw materials of agricultural and non-agricultural origin.<sup>4</sup>

According to available estimates, in all continents except Europe and Oceania, the production of agricultural raw materials was larger in 1940 than in 1939.

The recovery in the production of non-agricultural raw materials in 1939 extended to most parts of the world. In Continental Europe, the U.S.S.R., Oceania and Latin America the output rose above the boom level of 1937. In North America that level was surpassed in

<sup>1</sup> Even before the war Europe was surpassed in foodstuff production per capita by food-exporting Oceania and North America and roughly equalled by likewise food-exporting Latin America whose average food-consumption standard, however, was lower.

<sup>2</sup> For fuller information on this point see *Europe's Trade, A Study of the Trade of European Countries with Each Other and with the Rest of the World*, League of Nations, 1941.

<sup>3</sup> This applies also to feed grain production (not included in the foodstuff index), the drop in which was even more pronounced.

<sup>4</sup> Reference should also be made to Table 4 giving indices of world production, *inter alia*, of these two groups of raw materials and their main constituent elements.

Table 2—Distribution and Movement of Primary Production by Continental Groups

1938 = 100

	Europe excl. U.S.S.R.	U.K. and Ireland	Conti- nental Europe	U.S.S.R.	Asia excl. U.S.S.R.	Africa	Oceania	Latin America	North America
<b>A. Foodstuffs</b>									
{ % distribution, average 1936-38 .....	37.7	2.8	34.9	12.5	17.3	2.4	2.9	8.7	18.5
Indices:									
1936.....	95	101	95	80	100	93	99	97	92
1937.....	97	99	97	103	101	98	105	97	96
1939.....	100	100	100	104	100	104	109	97	104
1940 <sup>1</sup> .....	(93)	(102)	(92)	(107)	98	100	96	100	108
<b>B. Raw Materials</b>									
{ % distribution, average 1936-38 .....	25.7	5.1	20.6	11.2	16.2	4.1	2.4	5.9	34.5
Indices:									
1936.....	92	99	91	96	103	92	93	89	106
1937.....	103	105	102	99	108	108	98	102	126
1939.....	105	104	106	103	104	101	109	102	113
1940.....	...	...	...	...	...	...	...	103	127
<b>C. Gold and Silver</b>									
{ % distribution, average 1936-38 .....	2.1	—	2.1	12.9	8.2	35.5	5.2	11.2	24.9
Indices:									
1936.....	88	—	88	105	80	91	76	90	85
1937.....	94	—	94	100	89	96	87	97	94
1939.....	101	—	101	92	110	106	104	101	108
1940.....	...	—	...	...	...	116	106	107	112

Table 2 (continued)

	Europe excl. U.S.S.R.	U.K. and Ireland	Conti- nental Europe	U.S.S.R.	Asia excl. U.S.S.R.	Africa	Oceania	Latin America	North America
<i>Total (A + B + C)</i>									
<i>(% distribution, average 1936-38)</i>	33.6	3.5	30.1	12.1	16.9	3.3	2.8	7.9	23.4
Indices:									
1936.....	95	100	94	85	101	92	97	95	98
1937.....	98	101	98	102	103	101	103	98	108
1939.....	101	102	101	104	101	103	109	98	107
1940.....	...	...	...	...	...	...	...	101	116
<i>D. Fodder Cereals</i>									
<i>(% distribution, average 1936-38)</i>	27.5	1.4	26.1	12.4	5.7	3.9	0.3	9.2	41.0
Indices:									
1936.....	97	95	97	95	95	107	99	122	62
1937.....	97	91	97	131	102	89	106	96	102
1939.....	98	90	99	113	111	103	113	137	100
1940 <sup>1</sup> .....	(92)	(99)	(91)	(120)	111	98	99	135	100

<sup>1</sup> Figures partly estimated.

Table 3—Distribution and Movement of Raw Material Production by Continental Groups

1938 = 100

	Europe excl. U.S.S.R.	U.K. and Ireland	Conti- nental Europe	U.S.S.R.	Asia excl. U.S.S.R.	Africa	Oceania	Latin America	North America
<b>A. Agricultural Raw materials</b>									
{% distribution, average 1936-38.....	9.1	0.8	8.3	11.1	32.7	8.4	6.4	9.0	23.3
Indices:									
1936.....	95	96	95	94	116	108	98	100	101
1937.....	109	93	110	101	112	115	101	102	148
1939.....	110	94	112	106	103	103	109	100	101
1940 <sup>1</sup> .....	(104)	(99)	(105)	(110)	111	105	107	105	109
<b>B. Other Raw Materials</b>									
{% distribution, average 1936-38.....	31.2	6.5	24.7	11.3	10.7	2.5	1.1	4.9	38.3
Indices:									
1936.....	92	99	90	97	90	76	85	83	107
1937.....	102	106	101	98	105	102	93	101	122
1939.....	105	104	105	102	104	99	109	102	115
1940.....	...	...	...	...	...	...	...	103	130

<sup>1</sup> Figures partly estimated.

1940 by a wide margin in response to the rapid expansion of manufacturing production both in the United States and Canada.<sup>1</sup>

In Table 4 the indices discussed above are split into commodity groups and some of these groups are subsequently broken down into individual commodities. The relative importance of the various groups will be seen from the figures showing their percentage shares in the total of the basic aggregates for 1936-38. The data require to be considered area by area.

Before the war, milk and meat accounted together for about 58% of the aggregate value (at 1930 prices) of the products covered by the world index of foodstuff production. For Continental Europe the ratio was nearly 64%. In the conditions of trade isolation brought about by the war, it is upon its own production of these two kinds of animal foodstuffs that Continental Europe is principally dependent for the sustenance of its population at anything like pre-war food standards.

While the meat production of all continents was larger and the milk production of no continent smaller in 1939 than in 1938, the Western Hemisphere accounted for the major part of the increase in the world production of meat and milk shown for 1939 in Table 4; and in 1940 the animal food production of that hemisphere continued to rise.

Between 1938 and 1940 milk production in North America rose by 4% and meat production by no less than 16%, pig meat accounting for most of that increase.<sup>2</sup> In Latin America, where meat production is estimated to have risen by nearly 4% in 1939, a continued marked expansion of Brazil's meat-packing industry in 1940 slightly outweighed a decline in export slaughtering in the Argentine and Uruguay.

Also in the case of Oceania the information available for 1940 suggests a moderate drop in both cattle and sheep slaughterings for

<sup>1</sup> The Federal Reserve Board index for manufacturing production in the United States of durable goods (all derived mainly from non-agricultural raw materials) stood 11% higher in 1940 than in 1937 (annual averages) and had by June 1941 risen to 54% above the 1937 average. In Canada, whose official production index as recently revised only extends back to January 1940, the quinquennium 1935-39 having been adopted as base period, the expansion of the industrial production, particularly rapid in 1940, appears to have been of roughly the same relative order between 1937 and the middle of 1941 as in the United States; for further information see Chapter VII.

<sup>2</sup> The peak of the latest pig cycle in the United States appears to have been reached in 1940 and some decline in pig slaughtering is expected to take place in 1941. The number of hogs slaughtered under federal inspection during the first five months this year compared with the same period last year declined in fact by 5%. The actual drop was confined to the first three months, however, while April and May slaughterings were larger than last year.

*Table 4—Indices of World Production of Principal Kinds of Primary Commodities<sup>1</sup>*

1938 = 100

% share in Total Production 1936-38	Commodity Groups	1936	1937	1939 <sup>4</sup>	1940 <sup>4</sup>
16.5	Food cereals and sugar . . . . .	90	93	98	92
[9.3] <sup>2</sup>	Fodder cereals <sup>2</sup> . . . . .	[82]	[99]	[104]	[101]
5.3	Potatoes, vegetables and fruit . . . . .	91	102	(97)	(95)
18.7	Meat . . . . .	99	99	103	<sup>5</sup>
1.2	Sea fish . . . . .	99	100	(100)	<sup>6</sup>
20.8	Milk . . . . .	99	99	101	<sup>7</sup>
1.4	Wine and hops . . . . .	77	93	(102)	<sup>8</sup>
1.3	Coffee, tea, cocoa . . . . .	103	100	99	97
1.4	Tobacco . . . . .	101	104	113	104
68.1	FOODSTUFFS, BEVERAGES, ETC. . . . .	96	98	101	<sup>9</sup>
3.3	Oil materials and oils <sup>3</sup> . . . . .	100	114	104	(104)
6.0	Textile fibres: natural . . . . .	108	120	104	109
[1.7] <sup>2</sup>	Rayon and staple fibre <sup>2</sup> . . . . .	[87]	[109]	[115]	[119]
7.7	RAW MATERIALS OF AGRICULTURAL ORIGIN . . . . .	106	119	104	(108)
75.8	TOTAL AGRICULTURAL PRODUCTION . . . . .	97	100	101	<sup>10</sup>
0.4	Rubber . . . . .	96	127	112	155
3.6	Wood products . . . . .	108	118	115	
11.7	Fuels and power . . . . .	97	106	106	
5.0	Metals (excluding gold and silver) . . . . .	91	118	113	
2.2	Non-metallic minerals . . . . .	89	99	105	
22.9	RAW MATERIALS OF NON-AGRICULTURAL ORIGIN . . . . .	97	110	109	
30.6	TOTAL RAW MATERIALS . . . . .	99	112	107	
1.2	GOLD AND SILVER . . . . .	87	94	106	112
100.0	TOTAL PRIMARY PRODUCTION . . . . .	97	102	103	

<sup>1</sup> Excluding production in the U.S.S.R.

<sup>2</sup> Series not included in the totals; the percentage shown represents the ratio of the excluded group to the aggregate of the groups included in the totals.

<sup>3</sup> One-half of each year's aggregate of this commodity group has been included with the foodstuffs and the other half with the raw materials in calculating the general indices for foodstuffs and raw materials.

<sup>4</sup> Figures in ordinary brackets are partly estimated or preliminary.

<sup>5</sup> Probably an increase of a few per cent. The index for the Western Hemisphere (accounting for 45% of pre-war meat production in the World apart from the U.S.S.R. and China) was: 1939, 105; 1940, 112.

<sup>6</sup> Probably a considerable drop.

<sup>7</sup> Probably a drop of a few per cent. The index for the Western Hemisphere (accounting for 30% of pre-war milk production in the World apart from the U.S.S.R. and China) was: 1939, 102; 1940, 104.

<sup>8</sup> Perhaps a drop of some 20%.

<sup>9</sup> Probably a drop of a few per cent.

<sup>10</sup> Drop lower than for foodstuffs.

export, while the production of pig meat—the smallest branch of the meat-packing industry in Australia and New Zealand—appears to have expanded, perhaps in connection with certain changes in Europe's trade referred to below.

The meat production in Continental Europe is believed to have risen to some extent and the milk production to have fallen off considerably in 1940. Before the war there was an appreciable net export<sup>1</sup> from the Continent to the United Kingdom both of dairy products and of pork in the fattening of which large quantities of skimmed milk are normally used. This export channel was closed by April-May as were the main channels to the Continent for the import of feeding stuffs and meat. Later on in the year, owing to a marked drop in the crops of fodder cereals and failure in hay crops over large areas of the Continent, domestic feeding stuffs also became scarce. For these and other reasons emergency slaughterings on a very large scale were carried out in the course of the summer which led to the rise in meat production just mentioned. According to information available for a number of countries this rise was followed by a sharp reduction in the autumn, when restriction of the civilian consumption of meat through rationing or "meatless days" was resorted to in all countries (with the notable exception of Portugal) where such restriction had not been previously imposed.<sup>2</sup> Milk production was reduced as a result of the shortage of feeding stuffs, the emergency slaughterings and the loss of cows during the early summer campaigns. Thus the decline set in earlier than in the case of meat.

Periodic data for 1940 are lacking for most of the countries on the European Continent. Such statistics available for Denmark and Sweden, however, are interesting as an illustration. The course of animal food production during 1940 and the early months of 1941 shown by these statistics is depicted by the following summary, figures showing the percentage increase or decrease in the milk and meat and (for Denmark) total animal food production in each quarter since the beginning of 1940 compared with that of the corresponding quarters of 1939. It should be mentioned that, to judge by the rationing data discussed in Chapter III, the animal food situation at the beginning of 1941 remained more favourable in Denmark and Sweden than in most of the other countries on the Continent of Europe.

The fall in the milk production, perceptible already in the first quarter of 1940, gained momentum as from the invasion of Denmark at

<sup>1</sup> Cf. *Europe's Trade*, League of Nations, 1941.

<sup>2</sup> Information regarding food regulations, if any, in the Baltic States and the parts of Poland and Rumania absorbed by the Soviet Union is not available.





Table 5 (continued).

1938=100

	Years	Wheat	Rice	Maize	Barley	Oats	Rye	Total Cereals	Sugar	Potatoes	Total— Cereals, Sugar and Potatoes
1.4	U.K. and Ireland.....	1936-37 1939 1940	— — —	— — —	80 95 (107)	96 89 (96)	77 81 (98)	86 89 (100)	153 155 161	97 106 (112)	91 96 (105)
23.4	North America.....	1936-37 1939 1940	98 102 100	81 102 96	74 106 116	86 92 112	64 82 77	79 99 101	78 95 92	100 97 107	80 99 101
7.4	Latin America.....	1936-37 1939 1940	94 100 83	109 138 137	122 159 151	95 113 90	55 123 152	91 98 112	101 103 92	82 105 105	93 99 108
3.0	Africa.....	1936-37 1939 1940	102 108 102	97 86 90	107 187 144	94 127 (94)	102 105 (105)	96 109 99	93 91 97	85 (92) (92)	95 108 99
29.5	Asia.....	1936-37 1939 1940	103 101 95	96 110 (110)	108 115 (114)	83 108 (108)	— — —	101 102 97	106 99 98	100 104 (104)	102 102 97
1.5	Oceania.....	1936-37 1939 1940	85 95 62	103 100 (100)	91 130 (119)	110 115 (91)	100 114 (100)	108 134 62	98 103 100	151 123 (123)	106 126 72

Quarters	Denmark				Sweden			
	Milk	Beef & Veal	Pork	All Animal Products	Milk	Beef	Veal	Pork
1940: I	- 2%	+ 3%	± 0%	- 2%	- 1%	+12%	- 5%	+10%
II	- 7%	+25%	- 1%	- 1%	- 7%	+15%	- 6%	+ 1%
III	-21%	+71%	+24%	+ 4%	- 7%	+42%	+ 8%	-17%
IV	-26%	+ 8%	-20%	-22%	-12%	+73%	- 7%	-22%
1941: I	-34%	-27%	-38%	-39%	-15%	+24%	-28%	-17%
April	-37%	-15%	-39%	-37%	-17%	- 6%	-25%	-23%

the beginning of April and the simultaneous closing of the westward shipping routes of Sweden. The decline was much accentuated during the autumn and the winter. The meat production,<sup>1</sup> which even in the first quarter of 1940 was somewhat above the pre-war level, expanded rapidly in Denmark during the second quarter, taking the form largely of live-cattle exports to Germany<sup>2</sup> and more slowly in Sweden. During the third quarter emergency slaughtering set in with full force to be followed by a sharp drop during the subsequent six months in Denmark, and also in Sweden as regards veal and pork, while the excess slaughtering of cattle in that country only began to diminish in the first quarter of 1941.

The decline in European meat and milk production following upon the large scale emergency slaughterings<sup>2</sup> and the additional losses of livestock referred to above can only be made good in the long run by the slow process of restoring the herds. During the autumn a serious lack of animal food<sup>3</sup> and especially of fats made itself felt and led to a reduction of meat, milk and fat rations for the civilian population<sup>4</sup> all over the Continent.<sup>5</sup> In the course of 1941 the situation deteriorated further particularly in several of the occupied countries as well as in unoccupied France and Spain. There have been drastic shortages in various parts of Spain ever since the civil war.

The curtailment of food rations in the United Kingdom was of course dictated by the shipping situation rather than by the domestic production which, though larger in 1940 than in the preceding four

<sup>1</sup> In the case of Denmark the basic data include, in addition to actual slaughterings, the weight of live animals exported.

<sup>2</sup> The greater part of the animals slaughtered in the Netherlands and Belgium and a large part also of those slaughtered in Denmark went to Germany.

<sup>3</sup> Apart from the drop in meat and milk production, seafishing was much disrupted by naval warfare, the shortage of motor fuels and the requisitioning of part of the fishing fleets for war purposes.

<sup>4</sup> The large consumption of animal foodstuffs by the armed forces—much higher generally per soldier than consumption per normal consumer in peace time—had made civilian rationing necessary even in countries where production had been sustained or increased.

<sup>5</sup> Cf. Chapter III, "Consumption and Rationing."

years as regards meat and not much smaller in the case of milk,<sup>1</sup> could only satisfy part of the requirements of this country.

Vegetable food, if it is available, can be largely substituted for animal food. How far was the 1940 production of vegetable foodstuffs in Continental Europe sufficient to compensate the actual or prospective shortage of animal foodstuffs? Table 5 throws some light on this question.<sup>2</sup> For wheat, the most important European cereal, absolute figures are also given in Table 6 for the world and its main jacent areas. Table 6 reproduces summary figures published in March of this year by the International Institute of Agriculture in Rome and Table 7 summarizes detailed estimates published in May<sup>3</sup> by the Office of Foreign Agricultural Relations of the U.S. Department of Agriculture.<sup>4</sup>

*Table 6—World Wheat Crops<sup>1</sup>*

	In metric quintals (000,000's)			
	1933-37 Average	1938	1939	1940 <sup>a</sup>
Europe <sup>2</sup> .....	430	496	464	380
North and Central America.....	245	355	350	376
South America.....	76	109	48	90
Asia <sup>3</sup> .....	160	185	186	199
Africa.....	36	38	46	39
Oceania.....	45	44	60	25
Total.....	992	1,227	1,154	1,109

<sup>1</sup> Excluding U.S.S.R., China, Iraq and Iran.

<sup>2</sup> Excluding Turkey.

<sup>3</sup> Including Turkey.

<sup>4</sup> Preliminary estimates.

Wheat crops in Continental Europe reached record figures in 1938 and were plentiful also in 1939 but turned out markedly short all over

<sup>1</sup> According to statements made in Parliamentary debates. See also *London Times*, June 14th, 1941, statement by the vice-chairman of the Milk Marketing Board.

<sup>2</sup> In this table the distinction between bread and fodder cereals applied in the general index calculations has been abandoned. Fodder cereals can and are, of course, used also for direct human consumption and have been so used lately to an increasing extent in Continental Europe.

The U.S.S.R. is excluded throughout this table as the very rough and admittedly conjectural crop estimates available for that country have for several years been insufficiently specified according to the different kinds of crops apart from wheat.

<sup>3</sup> Subsequent revisions have been taken into account in the table.

<sup>4</sup> *Foreign Crops and Markets*, Supplement, May 27th, 1941. The figures there shown in bushels have been converted here into metric quintals, the measure used in most of the agricultural production tables of the *Statistical Year-Book* of the League of Nations and in those published by the International Institute of Agriculture. The detailed notes of the original to which reference should be made have been omitted here for lack of space.

Table 7—Wheat Crops in Europe and Certain Adjacent Territories

Millions of metric quintals

Countries	Average 1933-37	1938	1939	Prelim- inary 1940 <sup>1</sup>
<b>Continental Europe:</b>				
I. Germany, Austria, Czecho-Slovakia and part of Poland occupied by Germany.....	79.7	90.6	80.0	65.3
Italy.....	72.7	81.9	79.7	72.9
Hungary, Roumania (excluding Bes- sarabia), Bulgaria and Albania.....	61.2	87.1	86.6	53.4
Total I.....	213.6	259.6	246.3	191.6
II. Greece and Yugoslavia.....	30.5	40.0	41.1	26.7
Denmark and Norway.....	4.1	5.4	4.9	2.7
Netherlands.....	4.4	4.4	4.1	2.7
Belgium and Luxemburg.....	4.6	6.0	3.8	2.4
France {Occupied.....	58.8	70.5	56.3	37.9
{Unoccupied.....	22.9	27.5	21.8	14.7
Total II.....	125.3	153.8	132.0	87.1
III. Finland, Sweden and Switzerland.....	9.5	12.8	12.5	7.6
Total I, II, III.....	348.4	426.2	390.8	286.3
IV. Spain and Portugal.....	43.5	30.5	34.0	31.0
Total I, II, III, IV.....	391.9	456.7	424.8	317.3
V. Baltic States and parts of Poland and Roumania occupied by Soviet Union .	20.2	24.5	23.2	18.0
Total Continental Europe <sup>2</sup> .....	412.1	481.2	448.0	335.3
United Kingdom and Ireland.....	18.2	21.8	19.6	22.3
Total Europe <sup>2</sup> .....	430.3	503.0	467.6	357.6
<b>Adjacent territories:</b>				
Turkey.....	30.8	42.7	41.9	44.9
U.S.S.R.....	250.0	225.0	250.0	270.0
French Morocco, Algeria and Tunis.....	19.3	19.6	27.5	17.4
Egypt.....	11.4	12.5	13.3	13.6

Source: U.S. Department of Agriculture: *Foreign Crops and Markets* (Supplement May 27th, 1941, and later data).

<sup>1</sup> Preliminary official estimates supplemented by approximations by the Office of Foreign Agricultural Relations, U.S. Department of Agriculture.

<sup>2</sup> Excluding Turkey and U.S.S.R.

the Continent, except Turkey,<sup>1</sup> in 1940 owing to unfavourable weather conditions, disruptions in the supply of farm labour, draught power and fertilizers, as well as outright destruction caused by the war. Table 5 suggests a decline in the total wheat crop of Continental Europe<sup>1</sup> in that year of some 19% compared with 1938. Excluding the important Turkish wheat crop, however, which reached an all-time record in 1940, the decline amounted to almost 25% according to the estimates of the U.S. Department of Agriculture reproduced in Table 7. It might be argued that the average for 1933-37 shown in that table was closer to "normal" than the somewhat exceptional crops of 1938 and 1939. Compared with that period during which, however, net imports accounted for 8.4% of the annual consumption,<sup>2</sup> the 1940 wheat crop of Continental Europe, Turkey excluded, was short by some 19%. In the territory covered by Germany, Austria, Czecho-Slovakia and the part of Poland occupied by Germany the drop was of the same order (—18%); it was somewhat heavier in Finland, Sweden and Switzerland taken together (—20%) and much heavier both in the Iberian peninsula (—29%)<sup>3</sup> and in the occupied countries included in Group II of the Table (—30%). On the other hand, in Hungary, Bulgaria and Roumania (excluding Bessarabia), shown in Group I, the drop was considerably lighter (—13%), whereas the 1940 crop in Italy may not have differed substantially from the 1933-37 average.<sup>4</sup>

The 1940 crops of other cereals on the Continent of Europe were scarcely less unfavourable than the wheat crop, and, although the sugar beet and potato crops were fairly normal in most countries (except France) or good in some countries, including Germany and Italy, they could at the best only provide a partial compensation for the shortage of cereals. Thus, far from being sufficient to bring effective relief from the shortage of animal food that developed during

<sup>1</sup> In Table 5 Turkey is included with Continental Europe in conformity with the territorial grouping applied in the *Statistical Year-Book* of the League of Nations.

<sup>2</sup> Continental Europe, excluding Turkey, average 1933-37:

	Metric quintals (000,000's)	%
Wheat crop .....	412	91.6
Net imports of wheat (including flour in terms of grain) .....	38	8.4
Wheat consumption .....	450	100.0

<sup>3</sup> In Spain the wheat crop has remained far below normal ever since 1936; compared with the average for 1931-35, the 1940 wheat crop of that country was more than 35% short.

<sup>4</sup> More recent reports suggest that the Italian crop figure for 1940 reproduced in Table 7 was overestimated; cf. *Foreign Crops and Markets*, July 14th, 1941, page 24.

the 1940/41 season, the aggregate production of bread and feed grains, sugar and potatoes fell seriously short of current requirements for that season. What quantities of cereals Germany was able to obtain from the U.S.S.R. before she attacked her is not known. Such amounts of vegetable foodstuffs from outside the Continent as may have reached the other countries cannot have been very significant. The shortage of cereals was alleviated to some extent—at any rate in certain regions—by drawing on previously accumulated emergency stocks which are believed, however, to have been virtually depleted in many areas by the end of the 1940/41 season. In some of the occupied countries—Poland and Belgium in particular—as well as in certain parts of unoccupied France and of Spain, conditions dangerously close to starvation seem to have developed.

Competent observers of European agricultural conditions concur in the view that the production of animal foodstuffs on the Continent is bound to deteriorate further during the 1941/42 season regardless of the outcome of the war operations. Unless the 1941 crops should prove to be substantially larger than those of the past year, the food situation of this part of the world will become increasingly grave. Weather conditions during the winter and early spring were none too good for the winter crops in large parts of the Continent and spring sowings were generally delayed. These facts, however, need not ultimately compromise the harvest results.

The Office of Foreign Agricultural Relations of the U.S. Department of Agriculture, in successive attempts to assess the food prospects of the European Continent for the 1941/42 season,<sup>1</sup> had reached, by the middle of July, the conclusions summarized below:—

Despite the unfavourable winter and spring weather, reduced fertilizer supplies and the general shortage of draught power and agricultural labour, some increase over last year's small grain harvests appears likely as damage from winter-kill has been less serious than last year while efforts to increase sowings appear to have been successful in several countries. Though midsummer weather conditions are reported to have been more favourable, harvesting will be considerably delayed as a result of the cool and very late spring. Root crops will probably be smaller in 1941 than in 1940 and the production of livestock products will be considerably lower—.

In the United Kingdom and Ireland, the crops of cereals, sugar and potatoes in 1940 were good—in all perhaps one-tenth larger than in 1939—and thus helped to relieve the demand for tonnage. The area under wheat has been considerably extended in recent years and

<sup>1</sup> *Foreign Crops and Markets*: Cf. in particular Vol. 43, No. 2, July 14th, 1941, and Vol. 42, No. 21, Supplement, May 27th, 1941, "Continental European Food Situation and Outlook."

the 1940 crop is estimated to have been some 13 to 14% above that of 1939 or more than one-fifth above the 1933-37 average while a further increase seems to be in prospect for 1941.<sup>1</sup> Stocks of bread grains in the United Kingdom were officially stated in June 1941 to be ample<sup>2</sup> and, as will be shown further below, surplus wheat stocks in Canada and the United States, the main sources of imports into the British Isles, were exceptionally large.

Wheat crops in the world excluding Europe (see Table 6) were fully as large in 1940 as in 1938 which itself was a record year, the conspicuous decline which occurred in Oceania (after a bumper crop in 1939) being offset by an equal increase in North America. The 1941 crop of the United States as officially forecast in August is expected to reach a volume of 951 million bushels, a 16% increase above the large output of 817 million bushels in 1940. This increase, however, might be more than offset by the drop foreseen in Canada as a result mainly of a 25% shrinkage of the wheat area consequent upon the introduction this spring of a scheme (similar to that applied since 1938 in the United States) for encouraging reduction of the acreage, record crops of 521 and 551 million bushels, respectively, having been harvested in 1939 and 1940.

In the North African countries considerably better wheat harvests are expected this year than last, while, in Asia, an increase of 20 million bushels forecast for China will only partly offset estimated declines of 30 million bushels in India and 8 million bushels in Japan. As regards the leading wheat countries of the Southern Hemisphere, reports on sowings effected in the Argentine and Australia suggest some reduction of the wheat acreage for 1941/42 compared with that of 1940/41.

The data regarding the main foodstuffs discussed above are supplemented for tobacco and the three tropical products, coffee, tea and cocoa, by the production indices shown in Table 8. The virtual elimination, in the course of 1940, of the Continental European market for the three last mentioned products as well as for non-European tobacco<sup>3</sup> enhanced the surplus problem facing the producers of these commodities in the other continents. This is largely true also of the oil materials and oils—all vegetable apart from whale oil—covered by Table 9. From the somewhat incomplete data available it would seem probable that the world output of these products serving as raw

<sup>1</sup> *Foreign Crops and Markets*, July 14th, 1941, page 23: "Increased acreages and favourable crop prospects point to larger [wheat] harvests this year than last for the British Isles."

<sup>2</sup> The rationing data analysed in Chapter III, "Consumption and Rationing," suggest that the consumption of bread, which is unrationed in the United Kingdom, has increased above peacetime standards in compensation for the decline in rationed food.

<sup>3</sup> The Turkish crops are included in the European index.

*Table 8—Indices of Production of Coffee, Tea, Cocoa and Tobacco*

1938 = 100

	Coffee				Tea			
	1936	1937	1939	1940	1936	1937	1939	1940
World excluding U.S.S.R. ....	114	102	101	95	89	95	96	97
North America .....	—	—	—	—	—	—	—	—
Latin America .....	117	103	101	94	—	—	—	—
Africa .....	86	84	104	105	69	106	102	...
Asia .....	113	117	101	...	90	94	95	97
	Cocoa				Tobacco <sup>1</sup>			
	1936	1937	1939	1940	1936	1937	1939	1940
World excluding U.S.S.R. ....	101	104	102	98	101	104	113	104
North America .....	—	—	—	—	81	111	133	97
Latin America .....	88	87	94	85	87	91	99	99
Africa .....	109	114	107	106	90	93	103	103
Asia .....	89	98	105	105	113	99	103	108

<sup>1</sup> Tobacco, Europe: 126 115 109 109

materials both for food and feed and certain chemical industries was as large in 1940 as in 1939. Production rose sharply in North and Latin America but dropped considerably in Africa and heavily in

*Table 9—Distribution and Movement of Oil Material and Oil Production by Continental Groups*

	<i>% distri- bution 1936-38</i>	<i>Indices (1938=100)</i>				
		1936	1937	1938	1939	1940
U.K., Ireland*	0.9	86	85	100	78	98
Continental Europe	14.3	98	132	100	127	(101)
U.S.S.R.	5.8	96	99	100	101	107
Asia	44.1	97	105	100	98	(99)
Africa	12.2	115	119	100	104	(98)
Oceania	0.9	106	109	100	102	(102)
North America	13.3	90	127	100	114	128
Latin America	8.5	121	108	100	88	110
World	100.0	100	113	100	104	(104)

\* Whale oil only.



Continental Europe (mainly olive oil), though, in the latter case, seemingly not below the 1938 level. However, since the Norwegian whale oil production, in reality located in the Antarctic, did not "accrue" to the Continent of Europe in 1940, while imports of oil materials and crude oils, the net balance of which before the war was normally as large as the Continent's own production, were practically cut off, an extreme shortage of oils and vegetable fats as well as of animal fats arose on the Continent.

In pre-war years Continental Europe was even more dependent on other continents for textile raw materials than for oil materials, its net imports of textile fibres being considerably greater than its own production. The degree of this dependence, however, tended to lessen somewhat year by year owing to the rapid expansion of its output of synthetic textiles which are included with natural fibres in Table 10.<sup>1</sup> The dependence of the British textile industry upon raw material imports was of course much more pronounced, as the first column of the table indicates. The drop of the domestic raw textile production

*Table 10—Distribution and Movement of Textile Raw Material Production by Continental Groups*

	% distri- bution 1936-38	Indices (1938=100)				
		1936	1937	1938	1939	1940 <sup>1</sup>
U.K., Ireland.....	2.5	105	108	100	114	100
Continental Europe.....	12.8	82	97	100	110	113
U.S.S.R.....	10.2	94	101	100	107	97
Asia.....	29.2	117	116	100	105	112
Africa.....	6.0	105	113	100	103	107
Oceania.....	6.2	98	101	100	109	107
North America.....	25.7	103	145	100	105	115
Latin America.....	7.4	94	100	100	105	103
World.....	100.0	102	116	100	106	110

<sup>1</sup> Preliminary estimates, based on somewhat incomplete data.

in 1940 to the low level of 1938, therefore, was by itself of no great significance for the manufacturing industry so long as raw material imports could be maintained<sup>2</sup> or stocks remained ample, which is officially stated to have been the case.

<sup>1</sup> The share of Continental Europe in the world production of all textile raw materials including synthetic semi-manufactures rose from an average of 12.8% in 1936-38 to about 15% in 1940. The separate indices of its production of synthetic textiles and natural fibres were as follows (1938 = 100) :

	1936	1937	1938	1939	1940
Rayon and Staple fibre	73	96	100	114	119
Natural fibres	94	100	100	105	107

<sup>2</sup> Quantity figures for the foreign trade of the United Kingdom during the war are not published, but the net import values (embodying the rise in c.i.f. prices) of textile raw materials since 1938 are as follows (£000,000's) :

1938	1939	1940
71.4	79.3	135.7

Emergency stocks in Continental Europe are believed to have been much reduced in 1940 and during the course of this year rationing of civilian purchases of textile manufactures and clothing became general. By June 1st, 1941 such rationing was introduced also in the United Kingdom.

The textile index for Oceania relates almost exclusively to the wool clip, which was slightly lighter in 1940.

The decline in the textile production index for the U.S.S.R. in 1940 was due to a 25% drop in its cotton crop. Elsewhere the cotton production was generally higher, though only in Latin America and India did it exceed the record figures for 1937.

*Table 11—Cotton Production*

In thousands of bales of 478 lbs.

	1937	1938	1939	1940
United States.....	18,946	11,943	11,817	12,566
India.....	4,788	4,248	4,136	4,841
China, incl. Manchuria.....	3,600	2,300	1,883	2,354
U.S.S.R.....	3,700	3,800	4,000	3,000
Egypt.....	2,281	1,728	1,801	1,900
Brazil.....	2,075	1,989	2,140	2,465
Argentine, Peru, Mexico.....	953	1,030	1,050	1,106
Anglo-Egypt. Sudan, Uganda.....	613	516	503	500
Turkey.....	299	306	300	218
All other countries.....	1,345	1,240	1,270	1,000 <sup>1</sup>
World.....	38,600	29,100	28,900	29,950

Source: U.S. Department of Agriculture, Bureau of Agricultural Economics, *The Cotton Situation*, May 1941.

<sup>1</sup> Rough provisional approximation.

Complete data on the 1940 production of non-agricultural raw materials are available only for the Western Hemisphere. The relevant indices for North and Latin America shown in Table 3 are broken down according to four main commodity groups in Table 12. North American production of wood products, metals and minerals was pushed in 1940 far beyond the high level of 1937, whereas Latin American mining was adversely affected by the difficulty of shipping ores to Europe for smelting. The rise in the Latin American index for non-metallic minerals reflects the impetus given by the war to Chilean nitrate production, when the synthetic nitrates previously exported in large volume by Germany and some of the countries which fell under German control in 1940 were no longer available outside Europe.

World production figures for 1940 with specification according to producing countries are available for only a few of the more important non-agricultural raw materials covered by the League index,

*Table 12—Movement of Production of Non-Agricultural Raw Materials in North and Latin America*

	% distri- bution of Total: 1936-38	1936	1937	1938	1939	1940	1940 as % of 1937
<b>NORTH AMERICA</b>							
Wood products.....	16.9	112	125	100	123	137	110
Fuels and Power .....	59.6	104	113	100	108	118	104
Metals <sup>1</sup> .....	17.8	114	157	100	134	173	110
Non-Metallic min.....	5.7	102	112	100	111	122	109
Total.....	100.0	107	122	100	115	130	107
<b>LATIN AMERICA</b>							
(Wood Products) <sup>2</sup> ....	(0.2)	(71)	(93)	(100)	(136)	(150)	(161)
Fuels and Power .....	52.1	88	101	100	107	103	102
Metals <sup>1</sup> .....	34.6	76	103	100	96	100	97
Non-Metallic min.....	13.1	86	100	100	102	107	107
Total.....	100.0	83	101	100	102	103	102

<sup>1</sup> Metal content of ores mined, excluding gold and silver.

<sup>2</sup> Unrepresentative.

*e.g.* rubber, petroleum, tin, aluminium and, less complete, copper. The rubber and tin statistics are published by the international control organizations and the petroleum data available are mainly official. While official information is also published regarding copper and aluminium in a number of countries, the data relating to the production of these metals in belligerent states and their colonies are mostly private trade estimates.

There was a spectacular increase between 1938 and 1940 in the world production of rubber (55%) and of tin (48%). Practically the whole production of these two commodities is located in territories of the Allied Powers, more especially the British Commonwealth, or accessible to them (Tables 13 and 15). This is largely true also of the petroleum and copper production (Tables 14 and 16). Scarcely 3% of the world output of crude petroleum<sup>1</sup> and 12% of the copper content of ores mined was derived in 1938 from territories which are now (end of July 1941) controlled by or readily accessible to the Axis Powers and Japan.<sup>2</sup> The present share of these powers is even less as the increase since 1938 in the production of crude petroleum has taken place exclusively and that of copper mainly in other territories.<sup>3</sup>

<sup>1</sup> Not counting the production of synthetic petroleum in Germany, the volume of which is not accurately known, but may have amounted to some 2.5 million metric tons in 1940.

<sup>2</sup> Their share in world smelter production of copper in 1938 was not quite 18%.

<sup>3</sup> Between 1938 and 1940 the world output of crude petroleum rose by 11-12% and that of copper probably by over 20%, the increase in the smelter production of those

*Table 13—World Production of Rubber*

Shipments in metric tons (000's)			
	1938	1939	1940
British Malaya, N. Borneo and Sarawak.....	406	419	604
Ceylon, India and Burma.....	66	78	114
Netherlands Indies.....	303	378	545
Total.....	775	875	1,263
French Indo-China.....	60	66	66
Thailand.....	42	42	44
Latin America.....	19	19	40*
Africa and Oceania.....	14	*18	
World.....	910	1,020	1,413

Source: International Rubber Regulation Committee, *Statistical Bulletin*.

\* Partially estimated.

*Table 14—World Production of Petroleum<sup>a</sup>*

In metric tons (000,000's)			
	1938	1939	1940
I. U.S.A. and Canada.....	165.2	172.0	184.0
II. Latin America.....	44.3	47.7	45.6
III. Iran.....	10.3	10.4	10.4
Netherlands Indies.....	7.4	7.9	7.8
Iraq, Arabia, Egypt, Bahrein Is., India, Burma, Borneo.....	8.1	8.7	8.3
Japan and Formosa.....	0.4	0.4	0.4
Total III.....	26.2	27.4	26.9
IV. U.S.S.R.....	28.9	29.5	29.7
V. Roumania.....	6.6	6.2	5.9
Rest of Europe.....	1.4	1.7	1.9
Total V.....	8.0	7.9	7.8
World.....	272.6	284.5	294.0

Source: *Statistical Year-Book and Monthly Bulletin of Statistics*, League of Nations, supplemented, particularly as regards 1940, by data published in *World Petroleum* (New York).

<sup>a</sup> Including shale oil but excluding synthetic petroleum.

countries (accounting for more than nine-tenths of the world smelter output in 1938) for which 1940 data are available amounting to about 24%. The smelter production of Japan, Korea and Formosa which, in 1938, was derived to the extent of one-fifth from imported ores, increased by some 11%, while that of Continental Europe, one-third of which was based on raw materials (ore, concentrates or matte) imported from other continents, is bound to have fallen off considerably in 1940. Belgium, the principal European copper smelting country, used exclusively imported raw materials. On the other hand, in the countries grouped under I-V in Table 16 the aggregate smelter production rose by some 26%.

*Table 15—World Production of Tin<sup>1</sup>*

	In metric tons (000's)		
	1938	1939	1940
I. Malaya (Fed. and Unfederated).....	43.9	56.9	86.8
Netherlands Indies.....	27.7	31.9	45.2
China and Burma.....	16.3	16.4	4
II. Thailand.....	14.9	17.2	17.7
Japan and Fr. Indo-China.....	3.9	3.1	4
III. Belgian Congo and Nigeria.....	18.2	21.4	22.0
Other Afr. Producers <sup>2</sup> .....	3.0	3.8	4
IV. Bolivia.....	25.9	27.6	38.5
Argentina, Mexico, Peru.....	1.9	2.0	4
V. Europe <sup>3</sup> .....	3.5	3.5	4
VI. Oceania.....	3.4	3.5	4
Unspecified.....	—	—	30.4*
World.....	162.6	187.3	240.6

Source: *Statistical Year-Book*, League of Nations, supplemented, particularly as regards 1940, by the *Statistical Bulletin of the Tin Research Institute* (Greenford, England), controlled by the International Tin Research and Development Council.

<sup>1</sup> Metal content of ores mined.

<sup>2</sup> Almost exclusively British Empire territories.

<sup>3</sup> Almost exclusively the United Kingdom and Portugal.

<sup>4</sup> Included under the "Unspecified" at the bottom of the table.

\* Partially estimated.

From Table 17 it will be seen that the last mentioned powers command a much larger share in the aluminium supply. The world output is estimated by the *Metal Bulletin* (London) to have been some 36% greater in 1940 than in 1938. The share of Germany, Italy and Japan in the total for 1940 is estimated at 40% (37% in 1938) and the share of the Continent of Europe at 50%. Although the North American output increased by nearly 40% between 1938 and 1940 (U.S.A. 44% and Canada 30%) a fear of a shortage of aluminium in the United States arose in 1941 owing to the greatly increased requirements particularly of the aircraft industry. A nationwide collection of old or unused aluminium ware was effected during the summer, however, and additional smelting plants are being planned and constructed, bauxite being available in abundance in the Western Hemisphere. High-grade bauxite deposits have been discovered also in Southern Rhodesia and are now being exploited for production *inter alia* of aluminium sulphate, an important basic material for the explosives and other chemical industries.

Table 16—World Production of Copper

	In metric tons (000's)			
	<i>Copper content of ores mined<sup>1</sup></i>	<i>Smelter production:</i>		
	1938	1938	1939	1940
I. United States.....	506	571	698	922
Canada and Newfoundland.....	267	216	230	280*
Total I.....	773	787	928	1,202
II. Chile, Mexico, Cuba, Peru and Bolivia.....	448	411	403	405
III. N. & S. Rhodesia, S.W. Africa and Union of South Africa.....	276	227	225	244*
Belgian Congo.....	124	124	123	113*
Total III.....	400	351	348	357
IV. Australia, India, Burma and the Philippines.....	67	23	27	30*
Total I, II, III and IV.....	1,688	1,572	1,706	1,994
V. U.S.S.R.....	98	98	107	113*
VI. Japan, Korea and Formosa.....	88	110	113	123*
VII. Yugoslavia and Norway.....	64	53	52	50*
Finland, Sweden, Portugal, Spain and Turkey.....	61	36	38	38*
Total VII.....	125	89	90	88
Total above Countries (I—VII).....	1,999	1,869	2,016	2,318
VIII. Belgium.....	—	81	...	...
Germany and Austria.....	30	69	66*	...
Italy, France, Czecho-Slovakia and Roumania.....	3	7	...	...
Total VIII.....	33	157	...	...
IX. United Kingdom.....	—	7	...	...
Grand Total.....	2,032	2,033	...	...

Source: *Statistical Year-Book* and *Monthly Bulletin of Statistics*, League of Nations, supplemented by the *Year-Book* of the American Bureau of Metal Statistics and, as regards 1940, by estimates of the *Metal Bulletin* (London).

\* Partly based on private trade estimates.

<sup>1</sup> Mining data for 1940 are lacking for most of the countries covered by the table.

Table 17—World Production of Aluminium

	In metric tons (000's)		
	1938	1939	1940 (estimates)
I. United States.....	130	148	187
Canada.....	66	75	85
Total I.....	196	223	272
II. United Kingdom.....	23	25	28
III. U.S.S.R.....	44	46	65
IV. Japan.....	20	23	30
V. Germany, Austria.....	166	185	240
Italy.....	26	34	40
Norway.....	29	32	25
Hungary and Yugoslavia.....	2	4	4
France.....	45	50	50
Switzerland and Sweden.....	29	30	33
Grand Total.....	580	652	787

Source: *Statistical Year-Book*, League of Nations, supplemented, particularly as regards 1940, by estimates of the *Metal Bulletin* (London).

The world production of iron and steel in 1938 and 1939 is summarized in Table 18. Reliable production data for 1940 are lacking for the majority of the belligerent countries.<sup>1</sup>

Table 18—World Production of Iron and Steel

	In metric tons (000,000's)					
	Pig Iron and Alloys			Steel Ingots and Castings		
	1938	1939	1940	1938	1939	1940
United States.....	19.5	32.4	42.6	28.8	47.9	60.8
United Kingdom, Canada, Australia, India, South Africa	10.4	12.3*		14.2	17.6*	
France, Belgium, Luxemburg..	10.1	12.7*		9.9	13.4*	
Rest of Continental Europe...	22.9	24.3*		30.3	31.3*	
Japan, Korea, Manchukuo....	3.0	3.3*		5.9	6.8*	
U.S.S.R.....	14.6	15.6		18.0	18.8	
Other countries.....	1.4	1.5		1.4	1.7	
World.....	81.9	102.1		108.5	137.5	

Source: *Statistical Year-Book* and *Monthly Bulletin of Statistics*, League of Nations.

\* Partly estimated.

<sup>1</sup> The monthly production data available prior to the blackout of statistics on account of the war have permitted of estimating the 1939 production of these countries with a fair degree of accuracy.

Of the increase of 29 million tons (+27%) in the output of steel ingots and castings between 1938 and 1939, over two-thirds or 19 million tons were accounted for by the United States, about 3½ million each by the British Commonwealth and by France, Belgium and Luxemburg, 1 million by the other countries on the European Continent (including Germany and Italy) and 2 million tons by the rest of the world. In 1940 the steel output of the United States increased by another 13 million tons, reaching a total more than double that of 1938. In that year, owing to the industrial recession, the margin of unused steel-plant capacity was particularly broad in the United States and considerable also in France as well as in the United Kingdom. In Germany, on the other hand, where incisive restrictions on iron and steel consumption for non-military purposes were enforced long before the war, the capacity limit of existing steel plants is believed to have been very nearly reached by the end of 1938. Later on she was able to draw on the steel industry of occupied countries for her war requirements. In Belgium, however (where the publication of current production data has been resumed), the output of pig-iron in 1940 is reported to have been 42% and that of steel 39% less than in 1939. Also the French iron and steel production would appear to have declined considerably.

In the United States during 1941 the steel output has run close to the limit of reported capacity, which is being extended, however, by reconditioning and expansion of old and construction of new plants. Towards the end of July it was announced that the Office of Production Management had approved proposals to increase existing capacity of pig-iron production by 6½ million tons, while the possibility of increasing steel ingot capacity by 15 million tons was being explored, the steel industry having already submitted plans for increasing existing capacity "in excess of 10,000,000 tons." Regardless of this expansion programme which might require considerable time for its full execution, measures are being taken for reducing steel consumption for non-defence purposes and more especially for the manufacture of private motor cars.

## STOCKS

The information about stocks of primary commodities published since the outbreak of war is scant. Indeed, tin is the only metal for which world stocks statistics are available today. It is known that certain European countries were accumulating stocks both of war material and of food before the war, and that these stocks have in general been largely depleted. It is known, too, that, on the other hand, during the course of the war stocks of certain products such as



cereals, fats, cocoa, etc., have been piling up outside the Continent of Europe in the countries producing those products, but only for a limited number of these commodities—especially those produced mainly in the western hemisphere—is anything approaching complete statistical information available. In spite of this paucity of figures, however, the general nature of the problems that present themselves and that are likely to present themselves in the future—the impoverishment of Europe, the financing and the final liquidation of accumulations elsewhere, the general and specific scarcity of metals—is patent enough and can be illustrated.

It may perhaps be convenient to begin with such illustrative data relating to minerals as are available. The Tin Research Institute continues to furnish world figures for tin stocks month by month; these are reproduced below for certain selected dates.

*Table 19—Tin Stocks*

In metric tons (000's) at the end of:

Tin Stocks	Jan. 1938	Jan. 1939	July 1939	Jan. 1940	July 1940	Jan. 1941	Apr. 1941	May 1941	June 1941
U.S.A., Stocks and landing .	4.9	4.8	5.4	1.8	6.7	9.6	5.1	7.3	2.9
U.K., Stocks and landing .	3.0	11.0	10.2	3.6	2.4	4.3	2.2	3.1	3.6
World afloat <sup>a</sup> . . . . .	9.2	6.5	7.4	19.7	24.1	25.3	28.4	27.4	27.6
Total visible supply . .	17.1	22.3	23.0	25.1	33.2	39.2	35.7	37.8	34.1
Carry over, Europe . . . . .	5.5	6.9	3.6	5.1	2.8	2.9	2.1	1.6	2.4
Carry over, Straits									
Settlements . . . . .	6.2	9.2	2.2	5.1	2.8	3.4	2.0	2.5	3.1
Smelters' Stocks <sup>b</sup> . . . . .	15.2	14.4	11.3	14.8	10.8	15.3	14.5	16.2	17.3
Total Stocks <sup>c</sup> . . . . .	44.0	52.8	40.1	50.1	49.6	60.8	54.3	58.1	56.9

<sup>a</sup> The increase in the proportion of stocks afloat is mainly due to the extension of shipping routes and decrease in the speed of transport.

<sup>b</sup> Smelters outside restriction areas.

<sup>c</sup> Tin and tin in ore and in intermediate products.

The production quota under the international tin control scheme which was lowered to 35% of the standard tonnage in 1938, owing to the industrial recession, was increased to 120% for the third quarter of 1939; after temporary reductions in the autumn of that year and the following spring, it was further increased to 130% for the third quarter of 1940 and maintained at that rate up to the end of 1941.

This increase in the production (or, in fact, shipping) quota was made mainly to allow the Tin Reserve Company<sup>1</sup> in the United States to build up a Government reserve of this metal by purchases in the

<sup>1</sup> A subsidiary of the Reconstruction Finance Corporation.

open market. For this purpose an agreement covering 75,000 tons of tin was concluded with the International Tin Committee in the summer of 1940. By the end of June 1941, when this total was raised to 112,500 tons, the amount actually received by the Reserve Company was reported<sup>1</sup> to have been 36,000 tons, apparently excluded from the international statistics summarized above.

The ratio of total stocks to apparent annual world consumption of tin as estimated by the Tin Research Institute was 24% in January 1940 and presumably but little lower during the first half of 1941.<sup>2</sup> The stocks of most other "strategic" metals probably afforded less comfortable safety margins.

Data on stocks of copper, lead, zinc and crude petroleum relate mainly to the United States:

*Table 20—Copper, Lead, Zinc and Petroleum Stocks*

In metric tons (000's) at the end of:									
Copper Stocks	Dec. 1936	Dec. 1937	Dec. 1938	July 1939	Jan. 1940	July 1940	Jan. 1941	Apr. 1941	July 1941
United States, Refined copper <sup>1</sup> . . . . .	146	235	263	287	123	196	106	90	89
Western Hemisphere, Blister copper <sup>2</sup> . . . . .	343	459	445	.	(362) <sup>3</sup>	.	(357) <sup>3</sup>	.	.
United Kingdom (Warehouses) . . . . .	47	29	30	24 <sup>4</sup>	.	.	.	.	.
Le Havre (Official Warehouses) . . . . .	11	10	7	10	.	.	.	.	.
Lead Stocks									
U.S.A., Refined lead <sup>5</sup> . . .	161	103	116	113	62	43	43	39	17
Lead in ore, etc., and refined <sup>6</sup> . . .	223	189	191	192	142	136	127	106	...
Zinc Stocks									
U.S.A. Refined zinc <sup>5</sup> . . . .	41	59	115	120	58	56	9	7	9
Petroleum (crude) Stocks					(000,000's)				
U.S.A. . . . .	41.0	41.5	39.4	38.6	34.3	37.4	37.2	37.6	36.0
Argentina . . . . .		0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4
Roumania . . . . .		0.4	0.4	0.4	0.5	0.4	(0.5) <sup>7</sup>	.	.

Sources: American Bureau of Metal Statistics, *Reports and Year-Book*; U.S. Department of Commerce, *Survey of Current Business*; U.S. Bureau of Mines, *Monthly Petroleum Statement*; League of Nations, *Monthly Bulletin of Statistics*.

<sup>1</sup> At refineries and in commodity exchange warehouses.

<sup>2</sup> At smelters and refineries and in transit.

<sup>3</sup> End of preceding month; exclusive of stocks at Canadian smelters and refineries.

<sup>4</sup> End of August 1939.

<sup>6</sup> At smelters and refineries.

<sup>5</sup> At refineries.

<sup>7</sup> End of November 1940.

<sup>1</sup> *The Economist*, July 4th, 1941.

<sup>2</sup> The publication of this ratio was discontinued in April 1940. It should be mentioned, however, that world production during the first half of 1941 was over 11% greater than during the corresponding period of 1940.

It will be seen that the visible stocks of copper, lead, and zinc in the United States declined rapidly during the course of this year.

Available statistics regarding aluminium stocks in the United States only show increases or decreases without disclosing the total volume of the stocks. The annual changes since the end of 1936 in stocks at producers' plants were as follows (in metric tons): 1937, -1,600; 1938, +51,300; 1939, -28,500; 1940, -27,400. Thus, at the end of 1940, according to these figures, total stocks were only 6,000 tons smaller than at the end of 1936; meanwhile, however, the demand particularly for aircraft production has very greatly increased, which explains the shortage to which reference has been made above.

The changes in United States stocks of crude petroleum (estimated before the war to have constituted about two-thirds of world stocks) have been comparatively slight during the last two years. Production during the first six months of 1941 was 3% or 2.7 million tons smaller than during the same period of 1940; but exports (excluding bunker oil) were down over 40% or about 2½ million tons. No great changes therefore occurred in the total domestic supply. Restrictions on petroleum consumption in the United States along the east coast were introduced, however, as from August 1941 in order to release for petroleum transport to the Allies part of the tanker tonnage normally required for domestic transports along that coast.

Rubber stocks have increased very considerably during the war, reaching an all-time record by the spring of this year. The percentage of the basic tonnage fixed (by the International Rubber Regulation Committee) as permissible exports from the regulated areas, which was 60% at the outbreak of the war, was gradually increased during the subsequent eighteen months to 100% for the first three quarters of 1941 and in August to 120% for the last quarter. As shown below, the volume of the stocks held in the rubber producing countries at the end of April 1941, though larger than in July 1939, was probably<sup>1</sup> somewhat smaller than in December 1938. As in the case of tin, the increase in primary stocks has taken place mainly in quantities afloat. In the United States, the world's largest consumer, taking normally more than half the annual world output of natural rubber, the stocks fell steadily from over 300,000 tons in the spring of 1938 to but little over 100,000 tons by the end of November 1939. Large reserves have been accumulated since then which amounted to 400,000 tons at the end of July 1941. The raising of the export quota mentioned above was made to facilitate the building up of a Government reserve in the United States. An initial amount of 87,000 tons of rubber for that purpose was received in exchange for 600,000

<sup>1</sup> Recent data on stocks in India and French Indo-China are not available.

Table 21—Rubber Stocks

In metric tons (000's) at the end of:

Rubber Stocks	Dec. 1936	Dec. 1937	Dec. 1938	July 1939	Jan. 1940	July 1940	Jan. 1941	Apr. 1941
Br. Malaya, Br. Borneo, Ceylon, Netherl. Indies and Brazil	107.2	156.3	168.4	141.0	162.7	133.9	149.6	162.0*
India .....	4.1	7.6	8.0	6.1 <sup>1</sup>	6.7 <sup>1</sup>	6.0 <sup>1</sup>	...	...
French Indo-China	1.2	6.1	6.9	4.6 <sup>1</sup>	7.3 <sup>1</sup>	...	...	...
Afloat .....	104.6	137.2	81.3	106.7	177.8	254.0	269.3	279.4
Total I. ....	217.1	307.2	264.6	258.4	354.5	(387.9) <sup>2</sup>	(418.9) <sup>2</sup>	(441.4) <sup>2</sup>
United States <sup>3</sup> .....	226.6	266.4	235.2	177.0	141.5	178.3	314.4	335.0
Total II. ....	443.7	573.6	499.8	435.4	496.0	(566.2) <sup>2</sup>	(733.3) <sup>2</sup>	(776.4) <sup>2</sup>
United Kingdom: In public ware- houses .....	79.7	58.7	88.2	58.2	.	.	.	.
With manufac- turers .....	24.8	22.5	15.9	20.0	22.2	(24.6) <sup>4</sup>	.	.
Total III. .	548.2	654.8	603.9	513.6	.	.	.	.

Source: *Statistical Bulletin*, International Rubber Regulation Committee.

\* Provisional.

<sup>1</sup> End of preceding month.

<sup>2</sup> Excluding India and French Indo-China.

<sup>3</sup> Stocks with manufacturers, importers, dealers, etc.

<sup>4</sup> End of May 1940.

bales of American surplus cotton under the barter agreement concluded with the United Kingdom in the summer of 1939, and in the summer of 1940 the Rubber Reserve Company (organized by the Reconstruction Finance Corporation) concluded an agreement with the International Rubber Regulation Committee providing for purchases in the open market of 330,000 tons up to the end of 1941—subsequently raised to 430,000 tons. Two hundred thousand tons had been received by the end of June this year<sup>1</sup> when the Reserve Company became the sole importer of rubber into the United States.

In order to reduce consumption from the recent annual rate of over 800,000 down to 600,000 tons, consumers are to be given a pro rata quota. The consumption of reclaimed rubber increased and totalled over 190,000 tons in 1940 and reached an annual rate of 230,000 tons during the first half of 1941.

For purposes of comparison, it may be mentioned that the Regulation Committee estimates the crude rubber consumption of the United Kingdom in 1940 at nearly 150,000 tons, the net imports of the Continent of Europe at about 130,000 tons, practically all in the first half of the year, and those of the rest of the world at about

<sup>1</sup> *The Economist*, July 4th, 1941.

160,000 tons. According to the estimates for the first six months of 1941, consumption would appear to have been well maintained in the United Kingdom and the intake of the European Continent and "rest of the world" combined<sup>1</sup> to have declined by 50%.

Although the stocks of rubber in the world today are larger than they have ever been, they constitute for the most part a deliberately planned reserve against war risks and do not represent a special problem similar to the surplus stocks of certain other commodities that have accumulated since the outbreak of war. These surplus stocks have nearly all been of vegetable origin.<sup>2</sup>

Thus, no serious surplus-stock situation has developed in respect of wool. Available supplies have been in eager demand during the war both for current consumption, which has increased materially, and for the purpose of building up reserves, especially on the part of the United Kingdom and the United States. Early in the war the United Kingdom undertook to purchase for several years ahead the entire Australian, New Zealand and South African clips. The United States demand has been satisfied mainly by South American producers, but in December 1940 the American government decided to create a reserve of Australian wool, amounting to 250 million pounds.

Until recently the raw silk market in Japan, by far the largest exporter of that commodity, benefited from the increased American demand consequent upon the business expansion in the United States. But since the freezing of Japanese accounts in that country and the complete cessation of raw silk imports the Japanese silk producers have been faced with a very difficult surplus problem.

The commodities of vegetable origin, large surplus stocks of which exist today, naturally fall into two classes: namely, those of which surpluses existed or tended frequently to occur before the war, such as cotton, wheat, sugar, etc.; and those the surpluses of which are almost wholly due to loss of markets during the war. In the latter class perhaps may be mentioned first the various vegetable oil materials such as copra, ground nuts, linseed, etc., large stocks of which are accumulating in the Philippines, Netherlands Indies, India, West Africa, Argentina and Uruguay, mainly owing to the closing of the European market. For these commodities and for a number of others, so long as they are reasonably easy to store, the immediate problem is and the ultimate problem will be mainly one of finance; for at the end of the war there will be an enormous potential demand if financial means can be found to satisfy it.

<sup>1</sup> Separate estimates for the European Continent are not given for 1941 by the Regulation Committee.

<sup>2</sup> For an account of the measures taken by the U.S. Government to alleviate the situation in certain Latin American countries, see Chapter VIII.

African and Caribbean cocoa producers are in much the same situation as the producers of oil materials. In the tea trade of India, Ceylon and Netherlands Indies, the International Tea Committee has been able to exercise a control over the stock position. The export quota kept at 95% of the standard tonnage during the year April 1939-March 1940 was lowered to 92½% for 1940/41 and to 90% for 1941/42. The coffee surplus in Brazil has for many years past placed the authorities of that country before difficult adjustment problems. The loss of most of the Continental European market during the war threatened to render the surplus increasingly burdensome despite the various attempts made to control production, the outright destruction of part of the surplus, and a five-months drought in 1940. This drought helped to reduce the coffee stock at Brazilian ports from 3½ million bags at the end of 1939 to about 2 million bags in April 1941. But there are, in addition, large unrecorded stocks in the interior of the country.

Other Latin American countries have also felt the impact of the war on their coffee exports. Consumption in the United States, the largest single market for coffee, has increased steadily in recent years, however, and may, with the maintenance of reasonable prices, be further increased, which would help to alleviate the surplus problem in the producing countries. In the autumn of 1940 an Inter-American agreement was negotiated with a view to the fixing of basic quotas for exports to the United States from each country concerned. Adjustments of these quotas according to the import requirements of the United States are made by an Inter-American Coffee Board set up under the agreement which went into effect in the spring of 1941. A first increase by 5% of the basic quotas for the year ending September 30th, 1941 was made in May to take effect as from June 1st.

According to the estimates of Messrs. Lamborn & Co., New York,<sup>1</sup> world consumption of sugar fell short of world production by roughly one million tons both in the year September 1939-August 1940 and in 1940/41. World stocks which amounted to nearly 10½ million metric tons—about one-third of the annual production—at the end of August 1939 are estimated therefore to reach 12½ million tons by the end of August 1941. Of this increase, Java alone accounts for well over 600,000 tons,<sup>2</sup> Cuba for about 350,000, and Continental Europe for nearly 700,000 (relating entirely to the first year of the war),<sup>3</sup> while stocks in the United States declined slightly from 1.5 to 1.4 million tons.

<sup>1</sup> Lamborn's *Sugar Statistical Bulletin*.

<sup>2</sup> Stocks in Java almost doubled between August 1938 and August 1941, rising from nearly 700,000 tons to a little short of 1,400,000 tons.

<sup>3</sup> A small decline is estimated for the second year.

Large as these estimated stocks of sugar are, by far the largest stocks in terms of value are those of wheat and cotton, and by far the greater part of the stocks of these two commodities—and also of maize and tobacco—are held in the Western Hemisphere. The situation with regard to these commodities is summarized in the following tables.

*Table 22—Wheat Stocks*

In bushels (000,000's), end of July:

Surpluses for export or carry-over:	1936	1937	1938	1939	1940	1941 <sup>1</sup>
United States <sup>2</sup> .....	142	83	153	252	282	395
Canada.....	127	37	31	110	299	496
Argentina <sup>3</sup> .....	60	45	72	230	75	155
Australia <sup>3</sup> .....	43	41	50	50	125	70
Four chief exporters <sup>3</sup> .....	372	206	306	642	781	1,116
Danubian exporters.....	34	40	36	75	85	...
Europe, excl. Danubian exporters.	296	220	194	374	440	...
World, excl. U.S.S.R. and Asia...	752	512	600	1,155	1,400	...

Sources: Wheat Studies of the Food Research Institute, Stanford University; *The Wheat Situation*, U.S. Department of Agriculture; *Monthly Review of the Wheat Situation*, Dominion Bureau of Statistics, Canada.

<sup>1</sup> Preliminary estimates subject to revision, particularly as regards the figures for Argentine and Australia, which are but rough forecasts.

<sup>2</sup> The U.S. data relate to the end of June each year.

<sup>3</sup> End-of-season surpluses were:

	1938	1939	1940	1941
Argentina, January 1st	60	222	62	130
Australia, December 1st of previous year	47	46	117	60
Four chief exporters, total of individual end-of-season stocks	291	630	760	1,081

The wheat surplus which arose during the late twenties and the early thirties in the four chief exporting countries had been practically wiped out by 1937. As a result of unusually large crops in subsequent years, however, and the shrinkage of export markets, the surplus today is greater than it has ever been.

Under the circumstances, the shouldering by Governments of the burden of financing the surpluses (by purchases or loans to the producers) and other national measures taken to avert a disastrous slump in wheat prices and to encourage acreage reductions can only relieve the pressure on the farmers for a transition period until an international solution of the surplus problem proves possible of realization.

In July 1941, an international wheat conference of Government representatives from Argentina, Australia, Canada, the United Kingdom and the United States met in Washington to consider the problems of the world wheat situation. A tentative agreement was drawn up and submitted to the respective Governments. While no details of

Table 23—Maize Stocks

	In bushels (000,000's)					
	1936	1937	1938	1939	1940	1941
U.S.A., Stocks on farms <sup>1</sup>						
end of September.....	175	61	353	556	555	(741) <sup>3</sup>
end of December.....	807	1,673	1,820	1,914	1,810	
Commercial stocks <sup>2</sup>						
end of September.....	4	6	10	15	41	(53) <sup>3</sup>
end of December.....	14	36	53	46	70	
Total <sup>1</sup>						
end of September.....	179	67	363	571	596	(794) <sup>3</sup>
end of December.....	821	1,709	1,873	1,960	1,880	
Argentina, Exportable Surplus:						
end of February.....	56	40	12	14	10	254
end of March.....	371	282	125	136	313	475

Sources: *Agricultural Statistics* (Annual) and *Crop Reports*, U.S. Department of Agriculture; *Revista Económica, Suplemento Estadístico*, Banco Central, Argentina.

<sup>1</sup> Including maize under Government loans on farms but excluding maize owned and stored in steel bins by the Commodity Credit Corporation amounting at the end of June 1940 and 1941 to 91 and 123 million bushels.

<sup>2</sup> Stored at terminal points.

<sup>3</sup> End of June 1941; corresponding figures at end of June 1940 were: on farms, 853; commercial, 25; and total 878 million bushels.

the draft agreement have been published it has been made known<sup>1</sup> that the discussions covered a wider range of subjects than those of previous international wheat conferences and that post-war relief received considerable attention besides the old problem of sharing world markets on some equitable basis. "In view of the record high level of world exportable stocks on July 31st, which are considered sufficient to meet the normal requirements of importing countries during 2 years, the exporting countries are faced with the necessity for some form of production control. In many countries, on the other hand, particularly in Europe, reconstruction problems will arise from the distortion of agriculture under war conditions. Not only must some plan be devised to remedy these abnormalities, but it is also desired that greater post-war happiness for the people may be attained through applying to their relief the increasing knowledge of the relationship of food to health. By means of an international ever-normal granary, it is hoped that a large pool of relief wheat may be made available at prices reasonable both to consumers and producers and free of charge to those made destitute by war."<sup>2</sup>

<sup>1</sup> Cf. *Foreign Crops and Markets*, U.S. Department of Agriculture, August 11th,

<sup>1</sup> *Ibid.*, page 145.

<sup>2</sup> *Ibid.*, page 145.



*Table 24—Cotton and Tobacco Stocks*  
*Cotton Stocks (in thousands of bales)*

World Carry-over by kinds						United States <sup>1</sup> Bales of 478 lbs.		United States			
End of Month	American <sup>1</sup> Bales of 478 lbs.	Egyptian Bales of 750 lbs.	Indian Bales of 400 lbs.	Sundry Bales of 478 lbs.	All kinds in terms of bales of 478 lbs.	Total Stocks	On farm and in Transit	Ware- houses	Mills- Stocks	End of Month	lbs. (000,- 000's) With dealers and manu- facturers
1936. VII	6,998	529	3,518	3,032	13,649	5,336	575	3,906	855	VI	2,484
1937. VII	6,235	461	4,011	3,550	13,695	4,387	400	2,769	1,218	VI	2,326
1938. VII	13,787	717	4,033	4,594	22,702	11,446	625	9,598	1,223	VI	2,504
1939. VII	14,137	590	3,612	3,705	21,633	12,956	550	11,591	815	VI	2,467
VIII						23,405	11,025	11,774	606	XII	3,130
1940. III						13,907	982	11,378	1,547	III	3,329
VII	12,692 <sup>2</sup>	607 <sup>2</sup>	3,561 <sup>2</sup>	3,986 <sup>2</sup>	20,454 <sup>2</sup>	10,619	620	9,086	913	VI	3,031
VIII						22,316	12,551	9,085	680	XII	3,437
1941. III						16,188	1,135	13,209	1,844	III	3,568
VII						12,300 <sup>2</sup>	...	...	...	VI	...

Sources: *Year Book*, New York Cotton Exchange;

*Survey of Current Business*, U.S. Department of Commerce.

<sup>1</sup> Excluding linters.

<sup>2</sup> Figures for stocks of American cotton held outside the United States and those of all other kinds of cotton at the end of July 1941 are based on trade estimates.

<sup>3</sup> Forecast by the U.S. Department of Agriculture (*The Cotton Situation*, July, 1941).

The maize situation resembles in certain respects that of wheat, though large-scale surpluses have arisen in fewer countries, principally the United States and Argentina. In the United States the end-of-season stocks showed a sharp increase between 1937 and 1940, but are expected to fall somewhat in 1941. On the other hand, the new crop, to be marketed in the late autumn, is estimated to exceed that of last year by 4%. The situation is not viewed with too grave concern, however, since an increased output of various animal products in connection with the Aid-to-the-Allies programme is expected to absorb a substantial part of the excess supply of maize for feeding purposes. A very large proportion of the maize surplus, as also of wheat, cotton, tobacco and several other crops, is financed by Government loans to the farmers.

In Argentina, where a very serious surplus situation arose as a result of the two consecutive bumper crops in 1939/40 and 1940/41, Government machinery on the United States model for financial assistance to the farmers took shape early in 1941, after a loan and credit facilities totalling \$110 millions (equivalent to 500 million pesos) had been negotiated for that purpose in the United States in December 1940. Sufficient storage facilities offering satisfactory protection from moisture were, however, lacking in the interior, and it is reported<sup>1</sup> that a considerable portion of the old crop is no longer suitable for export. At least one-quarter of the "exportable" surplus is believed to be thus affected and may therefore have to be destroyed. In this connection, an official campaign has been started to induce the use of unshelled maize as fuel for central heating and in cooking stoves as well as for goods-train locomotives.

The cotton surplus is principally a United States problem as is also the tobacco surplus. An anticipated 12% drop in the 1941 tobacco crop compared with that of last year, which was of average size, may help to relieve the position to some extent.

The huge excess of American cotton left by the record crop of 1937 and further increased in 1939 (despite a sub-normal crop in 1938) was appreciably reduced during the first year of the war when the channels of export largely remained open. Owing to the much enhanced difficulties of export during the subsequent twelve-months period, however, total stocks again increased in spite of record domestic consumption. The official forecast of the end-of-season (July 31st) stocks in 1941 puts the total but little below the corresponding figure for 1939. But the present year's crop is estimated to be about 14% less than last year's, which was not a large one, and reductions of the cotton acreage continue to be effected. Moreover, the rising domestic demand for cotton is likely to be intensified as a result of the recent stoppage of the silk imports from Japan.

<sup>1</sup> *Foreign Commerce Weekly*, U.S. Department of Commerce, August 9th, 1941.

## CHAPTER VII

### INDUSTRIAL ACTIVITY

The majority of the belligerent states no longer publish current statistics of industrial production and in many other countries this class of statistics is not yet highly developed. It is therefore not possible to present a comprehensive picture of the industrial changes in progress during the last two years. Moreover, even in countries in which production indices are still regularly compiled, they may be to some extent misleading because of the changes that are taking place in the relative importance of different industries and the growth of new industries not covered by the statistics. In times such as these, when radical changes in industrial structure are being effected and infant industries are being born, such indices tend rather to understate than to exaggerate industrial activity.

World industrial production, which had shrunk by about one-third between May 1937 and May 1938, recovered rapidly after the turn of the latter year. In Europe activity was intensified by armament efforts and continued to increase up to the outbreak of war; but in the United States it tended somewhat to decline again during the first half of 1939. The course of production during the war in those countries that have continued to publish indices of industrial activity may be judged from Table 1, below.

Unfortunately, these countries do not reflect individually or collectively many of the most significant effects of the outbreak of war, for few belligerents divulge the nature of their industrial changes. But an indication of the increase in activity in some of the belligerent countries is afforded by Table 2, which shows the state of employment.

In the countries of Europe that were at first neutral, the outbreak of war did not cause an immediate change in the upward trend of production; but in a number of them mobilization, the loss of foreign markets, difficulties of transport and, with gradual but increasing influence, the blockade, led to a contraction of aggregate output in 1940. As the year progressed, the pressure of these forces tended to make itself more and more acutely felt in certain of the countries which were not overrun by foreign troops. In the areas occupied by Germany, the requisitioning of raw materials and the incorporation

*Table 1—Indices of Industrial Production in  
Certain Countries, 1939-41*

G—General Index  
C—Goods Currently Consumed  
I—Investment Goods

M—Engineering  
T—Textiles  
P—Paper

1938 = 100

Country	1939				1940				1941	
Quarterly average	I	II	III	IV	I	II	III	IV	I	II
Belgium.....G	104	112	105	117	113 <sup>a</sup>	...	...	...	...	...
Bulgaria.....G	80	99	130	115	83	101	142	143	92	77 <sup>b</sup>
Canada <sup>1</sup> .....A	G	91	97	100	110	119	132	140	144	...
	C	101	104	106	121	113	111	110	120	...
	I	97	107	112	112	109	134	147	142	...
B	G	...	...	...	119	132	142	145	139	144
	C	...	...	...	105	109	107	111	110	115
	I	...	...	...	115	131	147	148	145	150
Chile.....G	87	97	101	109	103	112	112	112	125	116 <sup>c</sup>
Denmark.....	G	102	107	108	106	103	89	82	83	87
	C	104	107	107	105	104	91	83	85	85
	I	112	102	108	108	101	86	81	82	90
Estonia.....	G	109	105	115	109	102	115 <sup>a</sup>	...	...	...
	C	112	104	115	104	101	115 <sup>a</sup>	...	...	...
	I	101	108	116	104	96	113 <sup>a</sup>	...	...	...
Finland <sup>2</sup> .....G	108	95	92	54	40	31	40	35	43	...
Hungary.....	G	114	109	127	135	128*	128*	124*	134*	...
	C	115	103	123	134	128*	120*	115*	129*	...
	I	103	113	124	128	120*	135*	134*	133*	...
India.....	I	110	115	103	115	133	128	116*	122*	134*
	T	95	97	90	103	100	102	95*	91*	94*
	P	102	106	113	130	131	140	145*	153*	154*
Japan.....	G	105	104	108	101	97	99	106	...	...
	C	100	96	102	94	89	86	85	...	...
	I	108	109	113	106	103	109	118	...	...
Latvia.....	G	101	97	95	105	81	84 <sup>a</sup>	...	...	...
	C	106	96	89	107	85	84 <sup>a</sup>	...	...	...
	I	78	104	119	96	61	84 <sup>a</sup>	...	...	...
Norway.....	G	101	106	102	113	108	68	93	104	95
	C	96	104	101	118	107	76	97	104	94
	I	101	102	100	109	106	63	89	101	93
Roumania <sup>3</sup> .....G	100	92	113	102	95	96	...	...	...	...
Sweden.....	G	103	106	107	109	109	95	90	91	90
	C	100	103	105	110	108	87	84	85	84
	I	103	106	108	111	113	109	110	112	...
	M	103	106	107	109	111	110	110	113	112
United States.....	G	115	112	122	141	133	132	139	152	160
	C	110	118	114	122	116	117	118	127	131
	I	124	120	137	172	162	156	182	201	220
	M	114	117	127	148	152	152	169	188	215

\* Provisional figures.

<sup>a</sup> January and February only. <sup>b</sup> April only. <sup>c</sup> April and May only.

<sup>1</sup> A: 1926 = 100; B: 1935-39 = 100. Index changed from February, 1941.

<sup>2</sup> Export industries only.

<sup>3</sup> Manufacturing only.

of the various national economies into the German system of war economy led not only to a curtailment of total output but to radical changes in manufacture. Many industries producing consumers' goods for the domestic market were severely restricted or their plants closed down, while, when machinery was not transported bodily to Germany as was frequently done, industries of importance to the German war effort were kept active in filling German orders. In some cases, new plants were erected to meet German military needs. Thus, in both Denmark and Norway there has been an expansion of the heavy industries for this purpose, an expansion which is not immediately reflected in their indices of capital goods.

Of the four countries in Europe that remain neutral today, only Sweden publishes indices of industrial production. These indices are of particular interest as showing the effect of the blockade and of the changes in export markets. From a record level of 109 in the first quarter of 1940, the general index dropped sharply to 90 in the third quarter and has since remained approximately at this level. This drop, it will be observed, was almost wholly due to the consumers' goods industries. The capital goods index remained persistently high during the course of the year. For 1941, figures for this index are not yet available; but a comparison of the general index, which has remained almost stable, with the consumers' goods index, which has continued to fall, makes it clear that the heavy industries have continued to be actively occupied. Sweden is, of course, in a more favorable position than the other neutral countries of Europe as regards supplies of domestic raw materials. She had, moreover, laid in heavy stocks of strategic raw materials before the war and has since been developing the exploitation of zinc and lead.

In Switzerland, economic activity in general was affected during 1940 by the absorption of an exceptionally large proportion of the manhood of this country in the armed forces, and industry in particular by the difficulty of obtaining raw materials and by lack of coal. In consequence of this last-mentioned difficulty, coal mines near Zurich which are estimated to produce some 40,000 to 50,000 tons per annum have been reopened. But Swiss industry was able to overcome its difficulties with a considerable measure of success, as the following rough indices, based on statements made regularly by firms concerning their degree of activity, indicate:

Quarters	1937	1938	1939	1940	1941
I.....	116	90	106	126	120
II.....	117	90	118	116	
III.....	111	95	115	119	
IV.....	102	102	126	123	

Both in Switzerland and in Spain, the lack of raw materials has given a stimulus to the manufacture of synthetic fibres, and, indeed, throughout the world, the rupture of normal trade relations is causing radical changes in industrial structure and industrial processes. The scarcity of motor fuel in Europe is leading to constantly increasing use of charcoal and wood as a source of motive power and, as in Sweden, to the manufacture of new forms of gas. In Germany, Italy and Japan, large investments of capital have been devoted to the production of substitute raw materials such as textile fibres, cellulose feeding stuffs, lubricating oil from tar, artificial rubber, etc.

Portugal has been in a position to maintain its international trading relations more fully than most other European countries and has been less affected by raw material shortages. Her industry has continued to develop since the outbreak of war, more especially in the manufacture of consumers' goods and agricultural machinery.

The great reduction that has taken place in the industrial production of Finland is, of course, due not merely to the destruction and general dislocation caused by the war but to the loss of an important industrial area. It is estimated that the total material losses, including property destroyed by the enemy, has amounted to between one-quarter and one-fifth of Finland's national wealth. New refineries are, however, being established to deal with the domestic production of copper, molybdenum, nickel and iron.

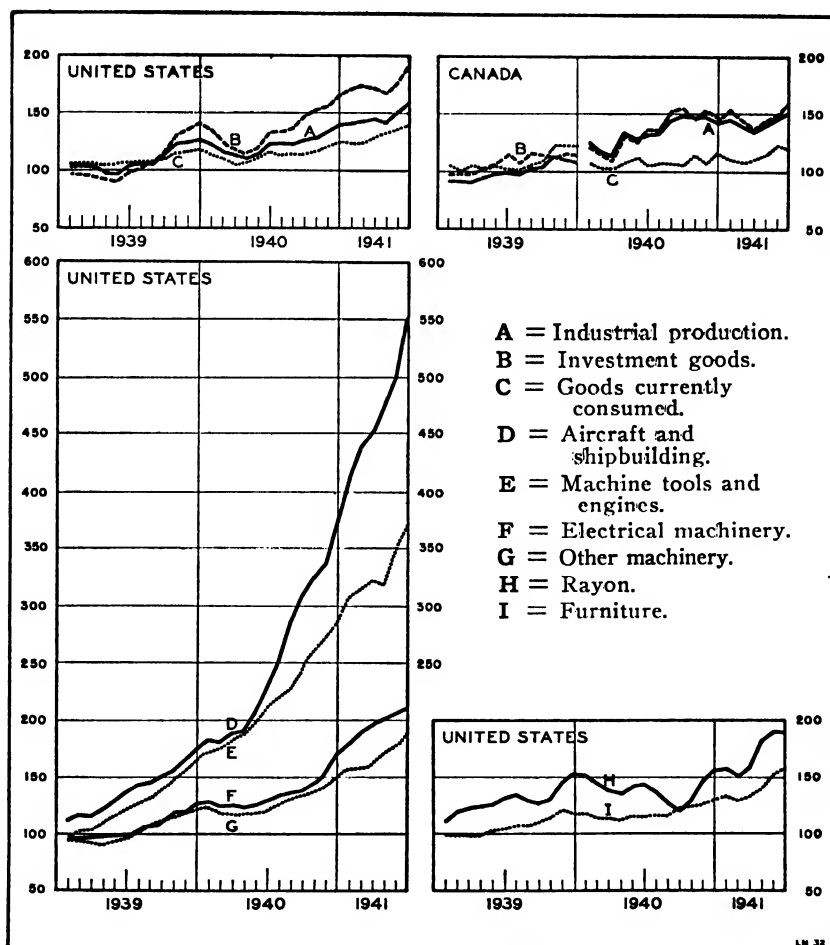
In other parts of the world, the general trends during the last two years have naturally been widely different from those in Europe. The picture is one of general expansion, the main exception being Japan, where activity was reduced during the first half of 1940 particularly on account of the scarcity of raw materials but mainly on account of the fall in textile exports and the persistent depression of the standard of living which are reflected in the consumers' goods index.

In Turkey, a second five-year industrialization programme had been launched in 1937; it was interrupted after the outbreak of war by failure to receive certain machinery and equipment which had been ordered in Central Europe, and was subsequently somewhat modified. Although a part of the plans for the construction of new plants was abandoned and certain plants under construction left uncompleted, such evidence as is available concerning production in 1940 points to a constantly increasing industrial activity. Thus the production of cotton yarn increased, as compared with 1939, by 20%, of woollen yarn by 31%, and of paper by 13%. Perhaps the most significant figures are those for coal production, which rose from a monthly average of 216,000 tons in 1938 to 225,000 in 1939, 252,000 in 1940, and exceeded 282,000 tons in March 1941.

The most striking expansion in recent months, shown in the table, has been in the United States of America. After a decade during which production had fluctuated round a level that, excepting in 1937, ruled lower than in 1929, the American armament programme, coupled with the increasing aid to Britain and other nations resisting

*Output of Certain Durable and Non-durable Products  
in the United States and Canada, 1939-41*

1935-39 = 100\*



Source: United States: *Federal Reserve Bulletin*; Canada: *Monthly Review of Business Statistics*.

\* Canada: Base for 1939, 1938 = 100.

aggression, has resulted in a rapid and all-round industrial expansion. During the first months of the war, the movements were erratic; an early outburst of activity in the autumn of 1939 was not maintained, and a late spring activity in 1940 was followed by renewed hesitation in the summer months. But from the third quarter of 1940, activity has constantly gained in momentum and by July 1941 production was almost 50% above the 1938 average.

The general trend of development in Canada has been similar, though the degree of expansion and the scope for expansion was somewhat less. Activity in 1938, which is used as the base year for comparison in the tables, was relatively greater in Canada than in the United States. In comparing the levels of production in the two countries during 1940/41, moreover, it is necessary to remember that Canada has endeavoured progressively to limit the production of goods for civilian purposes. More important than the aggregate changes, therefore, are the relative changes in output of different classes of goods. This may be judged from the diagram given above, which shows selected indices for Canada and the United States.

For the other British Dominions, no general indices of industrial output or activity are available. But reference to Table 2 will show that in both Australia and South Africa there has been a steady increase in industrial employment, though by no means as great as in

*Table 2—Indices of Numbers Employed in Industry  
in Certain Countries, 1939-41<sup>1</sup>*

1938 = 100

Country	1939				1940				1941	
	I	II	III	IV	I	II	III	IV	I	II
Quarterly average:										
U. of South Africa . . . . .	100	101	101	100	103	107	106	106	109*	111*
Australia . . . . .	98	99	97	102	107	107	110*	116*	118*	122 <sup>b</sup>
Canada . . . . .	96	99	104	108	110	115	125	129	134	152 <sup>b</sup>
Denmark <sup>2</sup> . . . . .	96	107	110	109	97	88	85	86	80	87 <sup>b</sup>
Hungary . . . . .	103	109	113	117	108	120	117	119	...	...
Japan . . . . .	105	111	112	112	111	115	113	113	113	...
Norway . . . . .	95	106	105	107	102	84	101	103	95	...
Norway <sup>2</sup> . . . . .	96	108	108	114	103	73	105	...	...	...
Sweden <sup>3</sup> . . . . .	88	91	92	91	93	86	87	89	86	80
Switzerland <sup>4</sup> . . . . .	101	105	86	101	103	99	105	105	104	106
United States . . . . .	106	105	110	119	115	108	117	126	129	137
United States <sup>2</sup> . . . . .	80	95	90	99	93	91	97	107	111	121*

\* Provisional figures.

<sup>a</sup> April only. <sup>b</sup> April and May only. <sup>c</sup> End of quarters.

<sup>1</sup> Statistics of establishments except in the case of Hungary where Social Insurance statistics are used.

<sup>2</sup> Hours worked.

<sup>3</sup> After December 1939: September 1939 = 100.



Canada. It will be seen that in the first quarter of 1941, the Union of South Africa showed an increase of 9%, Australia of 18%, and Canada of 34%; in the United States, the increase was 29% over the 1938 average. The employment figures for South Africa agree with those of coal production, which in 1939 was 3% and in 1940 6% greater than in 1938. These figures, however, afford no evidence about the shift that has taken place in general industrial activity, from production of consumers' goods to production of capital goods. In Australia, which is almost self-sufficient in metals, there has been a rapid development of the heavy industries, the manufacture of machine tools, of aircraft, etc. and shipbuilding.

In South Africa there has been an expansion in production and capacity not only of iron and steel but also of a number of industries supplying current consumption goods. In order to assist the new industries which are being built up, an organization known as the Industrial Development Corporation, with a capital of £5 million, was formed under Government auspices to foster and, if necessary, finance infant industries.

Although India publishes no general index, three group indices referring respectively to pig iron and steel ingots, textiles and paper, are published regularly. The development of the heavy industries has been remarkable, though the coal production in 1939 appears to have been 2% less and in 1940, only 3% greater than in 1938. It will be seen from Table 1 that in 1940 pig iron and steel production was 25% above, while the textile index was 3% below the 1938 level. During November and December 1940, an Eastern Group Supply Conference was held in Delhi to discuss ways and means of utilizing Empire resources in the production of armaments and consumers' goods and of coordinating the efforts of the different countries. An Eastern Supply Council was established to further such cooperation.

New Zealand is much less rich in minerals than Australia and her industrial expansion has been mainly in the consumers' goods industries. As in other countries, it has been limited by difficulties in obtaining raw materials and machinery. Great efforts have been made to meet the growing demand for power. The production of electrical energy by the Electrical Supply Distributing Authorities increased by almost a third in the year ending March 1940 and by a further 12% in the following twelve months.

Chile is the only Latin American country for which a monthly industrial production index is available and it is, in consequence, difficult to form a judgment concerning the changes in industrial activity that have taken place in Latin America during the last two years. The whole area has been subject on the one hand to the industrial stimulus caused by the difficulty of obtaining manufactured goods

from abroad and on the other hand to the impediments to development caused by the difficulties of obtaining coal and raw materials and the plant necessary for industrial expansion. In spite of these impediments, however, steps have been taken in a number of these countries not only to expand the production of consumers' goods but also to create heavy industries.

This expansion has been facilitated by the policy of economic collaboration within the western hemisphere that has been systematically pursued during the course of the war. The River Plate Regional Conference held at Montevideo in the spring of 1941 aimed especially at the promotion of local industries by assuring the exchange of raw materials and by improving market conditions within the hemisphere. An Inter-American Financial and Economic Advisory Committee was set up after the Conference of Lima in 1938, which has been responsible in its turn for the creation of the Inter-American Development Commission, with national branches composed of local commercial and industrial representatives, concerned with the development of jointly financed industries.

As already mentioned in Chapter V, the United States Export-Import Bank has granted loans to promote special enterprises in certain Latin American countries, the most important of which was the \$20 million loan to Brazil for the acquisition of steel mill equipment. The Bank has entered into similar commitments for the construction of roads and bridges, port developments, irrigation projects and other similar public works that constitute a necessary preliminary to industrial organization and development. Owing to the scarcity of coal deposits in Latin America, special attention is being devoted to the development of electric power, and part of the Brazilian Railway system is being electrified.

The dislocation of trade and the difficulty of transport have naturally led to the development mainly of industries based on domestic raw material resources. Thus, Brazil has started the manufacture of plastics from coffee beans and has been able to capture a considerable part of the Argentine market for cotton goods from Japan, and in Colombia also, where a considerable industrial expansion has taken place, the production of the textile industry has substantially increased. In Chile, the Government has instituted a *Corporación de Fomento de la Producción*, with the object of stimulating both industrial and raw material production.

In contrast to the greater part of the rest of the world, where the structure of industry has been mainly affected by armament requirements, it is the consumers' goods industries in Latin America—textiles, boots and shoes, soap, etc.—that have tended to expand the most rapidly.

A similar process of change in the industrial structure is to be seen in the Malay States and the Netherlands East Indies, though here, as elsewhere, the tendency has been restrained by the difficulty of obtaining plant with which to start production and of obtaining skilled labour. Up to the present, the nature of the change which is taking place outside the great industrial areas of the world is perhaps more significant than the actual degree of the change that has been effected. In no area, however, have recent events so profoundly affected the degree of growth as in the Far East. The Chinese National Government has encouraged the migration of industries from the seaboard to the interior, especially to the south-western provinces, where they are relatively secure from military interference and where exceptionally abundant raw material sources, mineral as well as agricultural, are waiting to be utilized. In the areas occupied by the Japanese, such industries as remained behind have frequently been dismantled and transported to Japan. The Japanese have in fact considered it in their interest to impede or to suppress industrial development in Occupied China. Their policy appears to have been to concentrate manufacturing industries (and especially all key industries) as far as possible in Japan, and to use the occupied areas primarily as a source of raw materials<sup>1</sup> and as a market for manufactured articles.

Germany's policy in Europe has shown a similar tendency to concentrate industrial capacity in the hands of the dominating power for reasons of a political and military character. From official acts and pronouncements it has become clear that Germany's ultimate aim is to discourage industrial development in the South-East and in certain other parts of Europe, and to use these regions in a purely complementary rôle as a source of raw materials and foodstuffs. Certain industrial areas (parts of western Poland, Czecho-Slovakia, eastern France, Luxemburg, etc.) have been directly incorporated into the Reich; industries situated elsewhere have frequently passed by various means into German ownership or control.

In the absence of statistics of production or employment, it is necessary to have recourse to figures of unemployment to obtain evidence concerning variations in industrial activity. But this evidence is at all times, and especially today, unsatisfactory and largely inconclusive.

The absorption of men by the armed forces automatically reduces the numbers available to industry. Moreover, particularly in the occupied areas, the principles of registration have been so greatly modi-

<sup>1</sup> The Japanese have endeavoured, for instance, to increase the cultivation of cotton in North China so as to lessen their dependence on American cotton.

Table 3.—*Statistics of Unemployment in Certain Countries, 1939-41*

I—Compulsory Unemployment Insurance Statistics  
 II—Voluntary Unemployment Insurance Statistics  
 III—Trade Union Funds Returns  
 IV—Trade Union Returns  
 V—Employment Exchange Statistics  
 VI—Official Estimates  
 U—Unemployed persons; A—Applicants for work  
 End of quarters (000's omitted)

Country	Nature of Statistics	1939				1940				1941	
		I	II	III	IV	I	II	III	IV	I	II
Australia	IV U	47	46	50	45	39	50	37	31	27	...
	IV U %	9.8	9.7	104	9.5	8.1	10.5	7.4	6.2	5.3	...
Belgium	II U	189	175	223	213	163	151 <sup>b</sup>	242 <sup>c</sup>	219	173	151 <sup>b</sup>
	II U %	18.2	16.8	21.0	20.6	20.5 <sup>a</sup>	...	...	...	...	...
Canada	V A	116	104	94	96	122	104	86	66	73	57 <sup>d</sup>
	VI U %	18.6	13.4	10.7	13.2	14.5	9.7	5.3	4.0 <sup>e</sup>	5.4	4.0 <sup>e</sup>
Chile	V A	9.5	9.3	10.2	8.7	8.0	7.8	9.8	8.2	4.8	3.0 <sup>b</sup>
	V A %	124	64	72	174	170	97	101	193	155	71 <sup>d</sup>
Denmark	III U	22.8	11.1	12.5	32.2	30.6	16.9	17.8	35.6	26.8	11.3 <sup>d</sup>
	V U %	4.3	2.1	4.9	0.9	1.6	4.9	5.0	3.9	5.8	5.8 <sup>b</sup>
Finland	V A	441	383	333 <sup>e</sup>	380 <sup>f</sup>	224	...	1059 <sup>e</sup>	824	534	377 <sup>d</sup>
France	V U	341	196	204	271	190	232	143	253	120	109 <sup>b</sup>
Netherlands	II U	22.5	17.5	16.7	20.9	19.4	25.0	15.3	17.3	15.4	13.5 <sup>b</sup>
	V U %	0.7	8.5	6.8	5.0	4.1	6.0	4.3	2.4	1.8	2.1 <sup>d</sup>
New Zealand	V U	33	21	23	29	29	37	23	22	43	17 <sup>d</sup>
Norway	III U	24.9	13.1	13.1	21.9	27.4	29.3	12.9	16.1	18.3	...
	V A %	1727	1350	1331	1361	1121	766	830	705	458	369 <sup>d</sup>
United Kingdom	I U	12.0	9.3	5.8	9.1	7.7	5.2	5.8	...	...	...
	IV U %	88	46	52	115	116	67	76	120	125 <sup>a</sup>	...
Sweden <sup>2</sup>	IV U	12.6	6.6	7.2	15.9	15.8	8.7	9.8	16.1	15.1	12.9 <sup>b</sup>
	IV U %	66	28	25	30	13	9	12	24	10	8 <sup>d</sup>
Switzerland	I, II U	10.0	4.4	4.2	6.1	4.9	3.6	4.8	7.6	3.6	2.8 <sup>d</sup>
	VI U %	6749	6283	5682	5746	5025	5734	4911	4760	5170	5098 <sup>b</sup>
United States <sup>1</sup>	VI U	19.1	17.5	15.0	15.1	16.9	14.9	11.7	12.5	11.1	9.7 <sup>b</sup>
	V U	34	20	17	24	43	19	17	32	46 <sup>a</sup>	...
Yugoslavia	V U										

<sup>a</sup> February. <sup>b</sup> April. <sup>c</sup> October. <sup>d</sup> May. <sup>e</sup> August. <sup>f</sup> November.  
<sup>1</sup> National Industrial Conference Board. <sup>2</sup> Excluding agriculture from January 1940.

fied as to render comparisons with the pre-occupation period well-nigh impossible. Not only have the rules of payments of unemployment benefits or relief been changed, diminishing the inducement to register, but the danger to the unemployed workers of being sent to work in Germany deters them from registering.

The figures in Table 3 for Belgium, France and Norway, therefore, understate the economic upheaval which resulted from the invasion. In France, in spite of the absence of some 2 million prisoners of war, over 1 million persons were seeking employment in October 1940; in the first quarter of that year there had been less than a quarter of a million. By May 1941, however, the figure had fallen to 377,000.

It is not necessary to consider here in detail the figures for those countries for which more detailed and satisfactory indications of industrial activity have been given in other tables. Of greater interest are those for Great Britain and such information as is available concerning the labour situation in Germany. It will be seen that the numbers unemployed in Great Britain fell from an average of almost 1,800,000 in 1938 to under 370,000 in May 1941, a figure which can represent little more than the hard core of unemployment—those who are sick or temporarily incapacitated or moving from one occupation to another. But, striking as they are, these unemployment figures fail to reflect the changes in structure, the diversion of production, the development of war industries that have taken place. Recent development was described in its broad outline by the Prime Minister to the House of Commons at the end of July 1941. He took as his "datum line" the three summer months of 1940, after Dunkirk. "Then our people worked to the utmost limit of their moral, mental and physical strength. Men fell exhausted at their lathes, and workmen and working women did not take their clothes off for a week at a time. . . . There was a great spurt in June, July and August of last year. Immense efforts were made, and every semi-finished work was forced through to completion, very often at the expense of the immediate future of production. . . . The Ministry of Supply output in the last three months," he continued, "has been one-third greater than in the three months of the Dunkirk period. Although our Navy, Army, and Air Force are larger, the Ministry of Supply has one-third more people working in its factories. Thus, despite dilution, dispersion, reduced food and black-out, and all the troubles I have described, each man is turning out, on the whole, each day, as much as he did in that time of almost superhuman effort. But all adverse factors . . . have somehow been cancelled out by the superior development of our machinery and organization."

In Germany, no current statistics of either production, employment or unemployment are made public. But the Reichsarbeitsminis-

terium has stated that the number of persons employed in Greater Germany has increased since the outbreak of war by nearly 2 millions to a total of approximately 22,700,000. Foreign civilian workmen would seem more than to account for this increase. These, according to the German press, amounted to approximately 2 million persons in the spring of 1941, 1,300,000 of whom were employed in agriculture and 670,000 in industry. Of the industrial workers, 90,000 were, according to other sources of information, employed in the iron and metal industries, 65,000 in mining and 380,000, in building. In spite of the large numbers employed in the metal industries and building, there is said to be shortage of workmen both for these and the timber industry. It should be observed that the figures of foreign labour do not include prisoners of war.

It has been shown in recent studies of the League of Nations that output per man-hour tended to increase during the '30's, but that when a state of full employment was reached, this increase tended to be arrested or even to be replaced by a decrease in productivity. Thus in Germany output per man-hour did not increase after 1936 and it showed a decided drop in Japan during 1938. It would appear to have fallen in Japan during 1939 by a further 5% and in the first eight months of 1940 by as much as 12%. This decline may have been accounted for, in part, by a scarcity of raw materials, but it was also probably due to the phenomena which naturally present themselves after a protracted war effort—the increased proportion of unskilled or semi-skilled labour, the wear and tear of machinery, industrial fatigue due to longer hours and a less satisfactory diet. When, as in Germany, large numbers of foreign workers are employed, an additional factor affecting productivity of labour is, of course, introduced.

In the United States and Canada, output per hour, and still more per man-hour, has continued to rise during the war. A comparison between the indices of industrial production and employment in the United States indicates an increase of output per worker from 100 in 1938 to 114 in 1939 and 121 in 1940; the output per man-hour had reached 114 in 1940, indicating that a part of the increased output per man was due to longer hours. The development in Canada shows a similar trend, the index figures of output per man in 1939 and 1940 being 109 and 122.

In certain of the neutral countries of Europe, productivity would appear to have increased during the first months of the war but to have started to fall early in 1940, owing in part, no doubt, to the effects of the economic blockade. The index of output per worker for Sweden averaged 118 in 1940 but had fallen by March 1941 to 114.

## CHAPTER VIII

### INTERNATIONAL TRADE

Anticipation of war had had a considerable influence on international trade for several years prior to September 1939. Emergency stocks of foodstuffs and raw materials were built up in several European countries and production and trade so directed as to lessen the risk of blockade. The exports of certain industrial countries in Europe had been hampered as manufacturing industries became engaged in armaments to an increasing extent; and the oversea export markets of these countries had been partly captured by the United States.

With the outbreak of war in September 1939 and the establishment of blockades, certain European countries were cut off from oversea markets while others were able, for some time, to continue or even extend their trade with such markets and thus increase their preparedness. While trade between the countries of Continental Europe fell off, a number of neutral countries—for instance, Switzerland, Sweden, the Netherlands and Denmark—were able to raise their imports of primary products from other continents. An increase also occurred in imports into the United Kingdom, where stocks of numerous commodities had to be replenished.

Earlier tendencies of trade were thus accentuated. For the countries involved in or menaced by war, imports became the central interest in trade, and exports only the means to an end. To promote imports, tariffs were in some cases reduced, while exports were frequently put under control or export duties imposed. To an increased extent, foreign trade became monopolized or centralized in the hands of government agencies, or strictly regulated by licence systems; and exchange control was introduced in almost all countries. United States exports—to Europe as well as other markets—advanced rapidly: during the six months ending March 1940 they amounted to \$2,060 million and the export surplus to \$704 million, as against \$1,498 million and \$546 million one year earlier.

With Germany's occupation of neutral countries in Northern and Western Europe, the military collapse of France, and Italy's entry into war, the conditions of trade materially changed. With the extension of the naval blockade to countries under German control and

the interception of the chief lines of communication with overseas markets of countries such as Sweden and Finland, the trade of Continental Europe with the outside world fell to very small proportions. It was further reduced by the Russian expansion in the Baltic and the German penetration in the Balkans. Trade within Continental Europe came largely under German control. The trade of the rest of the world came to centre round the United Kingdom and the United States.

Within each of the two big areas now considered—Continental Europe and the rest of the world—trade was governed by different price levels and price relationships. There was no "world trade" in any ordinary sense. In Continental Europe there was a scarcity of products normally imported from other continents, and in these continents there was accordingly a superabundance of such products and prices were depressed. But commodities of strategic importance were high in demand everywhere and their prices advanced.

Even within each area, however, prices and trading activities were far from uniform. In Continental Europe transport difficulties and the German exploitation of resources left but little room for "normal" trade. Elsewhere the reduction of shipping space and transport risks rendered trade over long distances increasingly difficult; freight and insurance costs in many cases became prohibitive and the margin between the prices in import and export markets of each commodity widened. In particular, the United Kingdom was affected by transport difficulties.

The severance between the two areas was not absolute. Spain, Portugal, the U.S.S.R. and, to a declining extent, certain countries of south-eastern Europe could maintain trading connections with Europe as well as the outside world; Switzerland maintained some trade with the United States and other overseas countries; France derived some imports from North Africa and, occasionally, from more distant countries; Germany is known to have imported certain products of the Far East—for instance, soya beans—over the Siberian railway, in spite of the high freights involved; the same route, as well as the shipping route over Petsamo, was also employed to a limited extent by Finland and Sweden, and from the beginning of 1941 Sweden was able to resume shipping on a small scale over Gothenburg.<sup>1</sup> But neither these nor a few other trading connections of a similar kind were able materially to alter trading conditions in the two areas.

<sup>1</sup> From the beginning of 1941 to the early part of May, Swedish trade on this route, chiefly with North and South America, amounted to about 70 million kronor (\$17 million), imports, and 30 million kronor (\$7 million), exports. Imports were carried on ten ships, exports on six; four ships were lost.



# SYNOPSIS OF TRADE RETURNS.

Available quarterly figures for total imports and exports since 1938 are summarized in Table 1 and 2 on pages 212 and 214. At the outbreak of war a number of countries discontinued the publication of trade returns and their example was followed later by others. Detailed returns, showing trade by articles and countries of provenance and destination, have become even more scarce, particularly in the case of Europe. From the middle of 1940, the statistics are admittedly incomplete as bases of analysis.

So far as can be judged trade values were maintained at a remarkably high level during the greater part of the period covered by the figures. In certain countries (particularly the United States and Canada) an increase occurred. But data are missing for certain countries, for instance Germany and Poland, the trade of which is likely to have dropped heavily during the early period of the war.

From the second or third quarter of 1940, however, a severe decline occurred in the exports of most European countries, including the United Kingdom. A number of South American countries were also affected. German trade, on the other hand, is reported to have increased during the last half of the year.

*Note to Tables 1 and 2.* Where not otherwise indicated, the figures represent special trade in merchandise only, even in the case of countries which are producers and major exporters of gold. In previous publications by the League of Nations Economic Intelligence Service, the trade in bullion and specie of certain of these countries used to be included with the merchandise trade. Annual gold exports of certain important producing countries were:

	U.S.A. \$(000,000's)		
	1938	1939	1940
Union of South Africa.....	246	•	•
Canada ( <i>net exports</i> ).....	127	177	•
Mexico.....	34	25	•
Argentine.....	41	8	65
India.....	57	90	•
Philippines.....	30	•	•
Australia.....	62	64	•

• I-VII: 277.

• I-IX: 135.

The figures refer to U.S.A. dollars according to the 1934 parity, equalling 0.88867 gramme of fine gold, or 59.06% of the "old" gold dollar employed in certain earlier publications. Conversion from national currencies has been made in accordance with the principles stated in *Review of World Trade, 1938*, Annex I (pp. 58-59). The difficulty of making international comparison of trade values increased very much during the war owing to the adoption of exchange control in almost all countries and to blockades. Account should be taken of the fact that, particularly from the middle of 1940, trade was conducted on a higher price level in Continental Europe than elsewhere.

The figures given in brackets are partly estimated.

*Table 1.—Quarterly Merchandise Imports, in new U.S. \$(000,000's). Special trade.*

Country or group	1938	1939				1940				1941
	quarterly average	1	2	3	4	1	2	3	4	1
<i>Africa</i> .....	362	(339)	(340)	.	.	.	.	.	.	.
Algeria, Tunis, French Morocco.....	62	56	61	.	.	.	106	101	89	94
Union of South Africa.....	112	111	107	90	83	101	40	17	21	.
Egypt.....	45	38	39	37	36	42	(132)	.	.	.
Other countries.....	143	(134)	(133)	(129)	(121)	(128)	.	.	.	.
<i>North America</i> .....	664	(663)	(745)	(745)	(870)	(833)	(872)	(885)	(962)	(972)
United States.....	488	513	559	550	654	631	612	629	669	695
Canada, Newfoundland and other countries.....	176	(150)	(186)	(195)	(216)	(202)	(260)	(256)	(293)	(277)
<i>Mexico and Caribbean</i> .....	157	(155)	31	28	32	33	26	26	38	33
Mexico.....	27	30	.	.	.	.	.	.	.	.
Curacao.....	53	43	(76)	(73)	(76)	(78)	(74)	(70)	(71)	(77)
Other countries.....	77	(82)	.	.	.	.	.	.	.	.
<i>South America</i> .....	301	(263)	(260)	(267)	(266)	(300)	(288)	(270)	(246)	(217)
Argentina.....	111	88	81	92	92	113	107	97	79	59
Brazil.....	74	67	65	63	67	73	67	60	51	58
Venezuela.....	24	24	28	28	26	28	24	22	17	(16)
Other countries.....	92	(84)	(86)	(88)	(81)	(86)	(90)	(91)	(99)	(84)
<i>Asia</i> .....	856	(850)	(978)	(916)	(848)	(959)	(992)	(894)	(898)	.
India, Burma, Ceylon, Br. Malaya.....	256	263	261	245	221	278	267	233	232	(262)
Neth. Indies, Indo-China, Philippines.....	114	93	115	135	118	(123)	(110)	(95)	(86)	.
Japan, Korea, Formosa, Manchuria.....	286	284	336	314	310	326	319	(294)	(330)	.
China.....	69	84	137	108	90	112	175	173	142	177
Other countries (including Hong-kong).....	131	(126)	(129)	(114)	(107)	(120)	(121)	(99)	(108)	.

	(177)	(171)	(162)	(126)	(181)	(182)	(172)	(152)	(132)
<i>Oceania</i> .....	190								
<i>Non-continental Europe</i> .....	1103	1069	939	942	1262	1259	1088	968	•
United Kingdom.....	1049	1016	892	890	1208	1197	1042	925	•
Ireland, Iceland.....	54	53	47	52	54	62	46	43	•
<i>U.S.S.R.</i> .....	66	(47)	•	•	•	•	•	•	•
<i>Total, Above Groups</i> .....	3699	•	•	•	•	•	•	•	•
<i>Continental Europe (excluding U.S.S.R. and Spain)</i> .....	2267	(2187)	•	•	•	•	•	•	•
Germany, Austria.....	610	519	•	•	•	•	•	•	•
Italy, France, Czechoslovakia, Poland.....	612	595	•	•	•	•	•	•	•
Belgium, Netherlands.....	386	382	335	371	365	(154)	93	•	•
Switzerland.....	92	104	91	140	138	130	57	95	104
Sweden, Norway, Denmark, Finland.....	337	355	344	418	(314)	(261)	213	268	202
Estonia, Latvia, Lithuania.....	27	27	26	19	18	(28)	•	•	•
South-Eastern Europe.....	171	186	155	151	163	191	151	157	•
Portugal.....	25	22	22	23	19	28	21	25	18
Other countries.....	7	(7)	•	•	•	•	•	•	•
<i>Total World</i> .....	5966	•	•	•	•	•	•	•	•

For Note to Table 1, see page 211.

*Table 2.—Quarterly Merchandise Exports, in new U.S. \$(100,000's). Special trade.*

Country or group	1938	1939				1940				1941
	quarterly average	1	2	3	4	1	2	3	4	1
<i>Africa</i> .....	274	(273)	(263)	.	.	.	.	.	.	.
Algeria, Tunis, French Morocco.....	61	56	62	.	.	.	.	.	.	.
Union of South Africa.....	36	36	30	34	36	42	41	27	32	25
Egypt.....	36	42	37	25	43	43	34	47	125	.
Other countries.....	141	(139)	(134)	(126)	(116)	(130)	(129)	.	.	.
<i>North America</i> .....	1011	(897)	(923)	(994)	(1232)	(1279)	(1266)	(1237)	(1276)	(1241)
United States.....	764	690	707	758	967	1043	979	942	973	967
Canada, Newfoundland and other countries.....	247	(207)	(216)	(236)	(265)	(236)	(287)	(295)	(303)	(274)
<i>Mexico and Caribbean</i> .....	171	(169)	53	38	40	49	39	52	36	32
Mexico.....	47	45	53	38	40	49	39	52	36	32
Curaçao.....	46	41	83	78	64	81	78	61	54	83
Other countries.....	78	(83)	(83)	(78)	(64)	(81)	(78)	(61)	(54)	(83)
<i>South America</i> .....	362	(357)	(396)	(366)	(384)	(412)	(391)	(284)	(302)	(338)
Argentina.....	110	116	127	101	123	155	127	74	74	96
Brazil.....	74	66	82	85	74	69	73	55	67	69
Venezuela.....	68	76	79	80	70	66	73	63	49	(66)
Other countries.....	110	(104)	(108)	(100)	(117)	(122)	(118)	(92)	(112)	(107)
<i>Asia</i> .....	853	(849)	(934)	(913)	(935)	(997)	(973)	(872)	(911)	.
India, Burma, Ceylon, Br. Malaya.....	296	297	312	312	336	339	373	325	332	(331)
Neth. Indies, Indo-China, Philippines.....	153	162	166	167	161	(182)	(173)	(170)	(175)	.
Japan, Korea, Formosa, Manchuria.....	249	238	304	315	317	256	288	(252)	(261)	.
China.....	38	31	33	21	27	28	30	28	30	33
Other countries (including Hong-kong).....	117	(121)	(119)	(98)	(94)	(132)	(109)	(97)	(113)	.

	198	(200)	(171)	(134)	(169)	(210)	(205)	(154)	(177)	(183)
<i>Oceania</i> .....										
<i>Non-continental Europe</i> .....	608	586	578	487	443	519	561	425	327	•
United Kingdom.....	575	558	549	452	403	484	525	383	280	•
Ireland, Iceland.....	33	28	29	35	40	35	36	42	47	•
<i>U.S.S.R.</i> .....	62	(33)	(33)	•	•	•	•	•	•	•
<i>Total, Above Groups</i> .....	3539	3364	•	•	•	•	•	•	•	•
<i>Continental Europe (excluding U.S.S.R. and Spain)</i> .....	1977	(1890)	(2020)	•	•	•	•	•	•	•
Germany, Austria.....	567	537	589	•	•	•	•	•	•	•
Italy, France, Czechoslovakia, Poland.....	501	504	515	314	282	321	(159)	75	•	•
Belgium, Netherlands.....	324	316	337	66	72	74	69	66	90	76
Switzerland.....	75	75	77	•	•	•	•	•	•	•
Sweden, Norway, Denmark, Finland.....	292	253	294	296	286	(234)	(155)	199	218	150
Estonia, Latvia, Lithuania.....	28	27	28	27	25	20	(28)	•	•	•
South-Eastern Europe.....	176	166	165	159	243	205	191	140	171	•
Portugal.....	13	11	14	13	15	14	14	15	17	16
Other countries.....	1	(1)	(1)	•	•	•	•	•	•	•
<i>Total World</i> .....	5516	(5254)	•	•	•	•	•	•	•	•

For Note to Table 2, see page 211.

The extent to which the value figures are representative of the quantitative exchange of goods depends, of course, upon the movement of prices. In spite of the decline in the prices of certain goods in non-European markets, the average prices of goods entering into trade increased during the early part of the war. From the middle of 1940 a slight decline in such prices set in, but the upward movement appears to have resumed early in 1941. The magnitude of these changes may be illustrated by the following quarterly import and export price indices for the United States (1923-25 = 100) :

	1938	1939				1940				1941
	(average)	1	2	3	4	1	2	3	4	1
Import prices . . . . .	54	54	55	55	57	60	60	59	57	59
Export prices . . . . .	65	63	62	63	67	70	69	68	67	68

In Europe the prices of goods entering into trade appear to have risen more than elsewhere. In particular, German export prices rose during the war. The decline in the course of 1940 in Europe's trade, in relation to that of other continents, is likely to be much greater therefore than it appears from the value figures alone.

The following analysis deals in the main with the conditions prevailing from the middle of 1940 when the full impact of war upon trade began.

#### TRADE OUTSIDE CONTINENTAL EUROPE.

It may be useful to consider first the group which is not only the most important but also that in which trade was least affected by government interventions and other disturbances. In 1938 this group represented 63% of world trade—United Kingdom, 14%, other countries of the British Commonwealth and Colonial Empire, 16%, U.S.A., 11%, and other countries 22%.

The loss to this area of the export market constituted by Continental Europe was one of the major disturbances of trade caused by the war. It may be mentioned by way of example that in 1938 Continental Europe absorbed 26, 47 and 50% respectively of the exports of wheat, cotton and wool from all countries of the outside world. The reduction of the demand from Continental Europe explains why world market prices for numerous staple products, after rising somewhat during the early months of the war when several European countries were still able to import heavily from other continents, became stationary or declined in the course of 1940.

The impact of these events fell with special severity on certain countries in the Western Hemisphere. Thus, in the Argentine, where

the partial closure of export markets for maize coincided with a bumper crop, the average export price of maize fell by over a half in the course of 1940 and large quantities had to be disposed of as fuel. The coffee market presented similar difficulties, particularly in Central American countries where unsaleable surpluses accumulated in spite of heavy purchases from the United States. In Cuba, sugar prices fell temporarily to a level lower than had prevailed during many years and a severe crisis developed. Large surpluses of wheat accumulated in the Argentine, Canada and the United States. Steps were taken or prepared in these countries to reduce the future production of wheat. In the United States the export difficulties affected a number of important agricultural products besides wheat, for example, cotton, tobacco, fruit and lard.

*Table 3.—United States: Exports of Agricultural Products.*

Product	lbs. (000,000's)				\$(000,000's)				Value VII-XII 1940 as % of VII-XII 1939
	1939		1940		1939		1940		
	I-VI	VII-XII	I-VI	VII-XII	I-VI	VII-XII	I-VI	VII-XII	
Wheat . . . . .	2,878	915	506	357	27.5	9.3	7.2	4.0	43
Fruit and preparations	.	.	.	.	36.7	44.3	21.7	12.7	29
Lard . . . . .	141	137	120	81	10.4	9.8	7.9	4.9	50
Tobacco . . . .	173	185	157	79	39.7	37.8	27.3	16.8	44
Cotton . . . . .	752	1,815	1,654	396	68.5	175.0	173.7	40.0	23
Other agric. products . . . .	.	.	.	.	85.4	110.7	114.9	85.8	78

Countries in other continents were also adversely affected. Asiatic countries suffered at once from the weakening of export markets and from shipping difficulties. In India the prices of numerous agricultural products fell far below pre-war levels. Exports of soya beans from Manchuria and of silk from Japan were reduced. The market for sugar, in particular, was adversely affected: exports from the Netherlands Indies fell off; in Australia it was proposed early in 1941 to use part of the sugar surplus as fuel; and the Philippine sugar exports to the United States were threatened by shipping difficulties.

The effect of the loss of the Continental European market would have been much greater had it not been mitigated by heavy purchases by the United Kingdom and the United States.

British purchase agreements placed under the control of the United Kingdom the export surplus of wool in Australia, New

Zealand and the Union of South Africa, that of copper in Rhodesia, jute in India and cocoa in British West Africa, British West Indies and Ceylon, of tea in India and Ceylon, of meat, butter and cheese in New Zealand, etc. Similar arrangements provided for the purchase of goods also from countries outside the British Commonwealth of Nations (but within the "sterling area")—for instance, cocoa, palm kernels, palm oil, ground nuts, etc., from the French Cameroons, coffee, cocoa, cotton and timber from French Equatorial Africa, and a number of similar products, as well as copper and gold, from the Congo. The purchases, which were in excess of the current requirements of the United Kingdom, did not always imply shipment to that country; the quantities bought were stored in part in the selling countries, while another part was resold elsewhere (for instance, Australian wool to the United States). The fact, however, that large quantities of goods were withdrawn from the market helped to support prices. On the other hand, the payment received from the United Kingdom accumulated as sterling deposits in London of the countries concerned and could be drawn upon only for payments within the sterling area. These purchases thus had the double effect of stabilizing economic conditions and facilitating the blockade measures, without involving a heavy strain on the balance of payments of the United Kingdom.

As European supplies became unobtainable British demand was directed to other continents and made its influence increasingly felt. Before the war the United Kingdom derived not far from a third of her imports from Continental Europe; her purchases from the continent of five products alone—butter, bacon, eggs, wood and wood pulp—amounted to £93 million in 1938.<sup>1</sup>

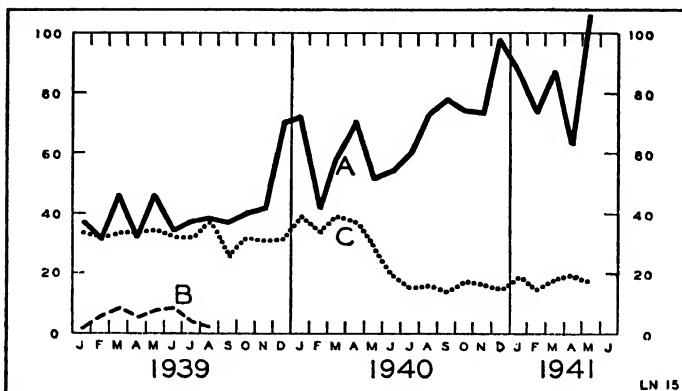
United States imports of staple products increased considerably in the course of 1940 and the early part of 1941, owing in part to greater industrial activity, especially in the armament industries, and in part to the policy of establishing reserves of strategic raw materials similar to those accumulated by various European countries in the late thirties. Thus the increase by two-thirds in the quantity of United States imports of rubber (from 476,000 to 792,000 metric tons) more than offset the reduction in European demand. The stocks of rubber within the United States, which had declined during 1939, were replenished; shipments from producing countries increased over 1939 by 38%; the price of rubber rose and the percentage of the basic export quotas fixed by the International Rubber Regulation Committee was raised from 50% during the first half of 1939 to

<sup>1</sup> £99 million if the U.S.S.R. is included.



*Diagram 1. Monthly Net Imports of Crude Rubber, in long tons (000's)*

**A:** United States of America; **B:** United Kingdom  
(figures available only to August 1939 inclusive)  
**C:** Rest of World



80-90% during 1940 and 100% during the first quarter of 1941.<sup>1</sup> Similar conditions prevailed in the market for tin, the chief consumer of which is also the United States. Imports of tin into that country rose by 78% (from 71,000 tons in 1939 to 126,000 in 1940) and world tin production increased by 30%. In October 1940 a contract was signed for the delivery of large quantities of Bolivian tin ore to the United States where a smelter plant was to be erected. United States wool imports rose from 246,000 tons in 1939 to 360,000 tons in 1940, or by 46%, and in 1941 purchases were further increased on account of the Government decision taken in December 1940 to establish a strategic reserve of Australian wool totalling 113,000 tons (250 million lbs.). This reserve, however, of which the first shipments arrived early in 1941, is being stored in bonded warehouse and thus does not enter into the trade figures given on page 212. A reserve of copper is also being built up through large purchases from Chile, and imports of various other products of strategic importance advanced rapidly. In the early part of 1941 United States purchases of primary goods had a marked effect upon prices. Imports of non-strategic materials began to be hampered, however, by the gradual withdrawal of British and British-controlled vessels from

<sup>1</sup> The United States purchases were made in part under an American-British barter deal, involving the shipment of rubber from British Malaya to the United States against American cotton to the United Kingdom.

trade routes between the United States on the one hand and South America and the Far East on the other for service in the North Atlantic, and by the preference given by the United States Maritime Commission to shipments of strategic materials.

In general, countries that are suppliers of strategic materials managed to maintain their sales on a high level even after the middle of 1940. Thus, the dollar value of exports from Bolivia, British Malaya and the Netherlands Indies during the third and fourth quarters of 1940 (as far as the information goes) were substantially higher than during the corresponding period of 1939 and also exceeded average quarterly exports in 1938.

The increased purchases of the United Kingdom and the United States did not affect all countries. The United Kingdom naturally had to consider in the first instance the economy of the countries within the British Commonwealth of Nations or otherwise closely linked with her. Further, she had to reserve her dollar resources for purchases of war materials and other goods obtainable only in the United States—a fact which helps to explain the decline in United States exports of agricultural products to which attention was drawn above. Trade between other countries was affected by the breakdown of triangular settlement. The scarcity of shipping space put a special strain on certain countries situated far away from their remaining export markets or producing goods of small military importance or of so low a value per unit of volume or weight that freight and insurance costs became more or less prohibitive. In several countries whose exports suffered and whose requirements of foodstuffs or manufactured goods could not be met by imports, the tendency towards self-sufficiency that had existed already before the war was strengthened. In India, for instance, various manufacturing industries developed rapidly in spite of the difficulties of acquiring industrial machinery. In Brazil the iron and steel industry made substantial progress: production of pig iron rose in 1940 by 8%, of malleable iron by 34% and of steel by 24%; and the construction with the aid of United States capital of a large-scale iron works was planned.

With the trade of Continental Europe cut off, and other great industrial countries concentrating so great a part of their resources on the manufacture of goods required for the conduct of war, a real scarcity of industrial goods in the importing markets arose.

Nevertheless, United Kingdom exports in 1940 were maintained at the same sterling value as in 1939, and those of manufactured goods actually exceeded the 1939 figure by 2%. It is known that in the spring of 1940 even the quantum of exports exceeded the pre-war level. As the European market normally absorbs over a third of the British exports, the sterling value of exports to other continents must

have risen considerably. Though figures concerning the geographical distribution of trade during the war have not been published,<sup>1</sup> it has been revealed that during the six months ended August 31st, 1940, the aggregate exports to destinations outside Europe and the Mediterranean were 20% above the figures for the corresponding period of 1939.<sup>2</sup> Owing to the extent to which the heavy industries were engaged in the war effort, however, there was a marked switch-over to articles of consumption, and a decline in the exports of iron and steel, machinery and vehicles:

*United Kingdom Exports (domestic produce), in £ (000,000's)*

Articles wholly or mainly manufactured:	January-November		
	1938	1939	1940
1. Iron and steel and manufactures of. . . . .	38.2	30.1	29.2
2. Machinery. . . . .	52.8	43.7	34.7
3. Vehicles (including locomotives, ships and aircraft) . . . . .	40.8	36.3	29.5
Total 1-3 . . . . .	131.8	110.1	93.4
4. Other manufactured articles. . . . .	204.4	196.8	222.0
Total 1-4. . . . .	336.2	306.9	315.4
Foodstuffs, raw materials, etc. . . . .	85.3	81.7	66.3
Total (excluding parcel post) . . . . .	421.5	388.6	381.7

These value figures are apt to be misleading, however, for the depreciation of sterling by 14% in the course of 1939 was accompanied by a rise in export prices, and there was a general decline in the quantities exported even of consumption goods. Thus, while the aggregate exports of cotton yarns and manufactures was maintained in sterling value, the quantity of cotton yarns fell from 113.6 million lbs. in 1939 to 66.8 million in 1940 and that of cotton piece goods from 1,392 to 979 million square yards. The quantity of cotton yarns exported was actually at its lowest level for the past 100 years and that of cotton piece goods less than in any year since 1847.

Moreover, while British exports were maintained at a fairly high level up to the middle of 1940, they fell off rapidly from that time. While their sterling value during the first and second quarters of 1940 amounted to 101 and 111%, respectively, of that during the same quarters of 1939, the corresponding figures for the third and fourth quarters were only 94 and 67% (Table 2, page 214).

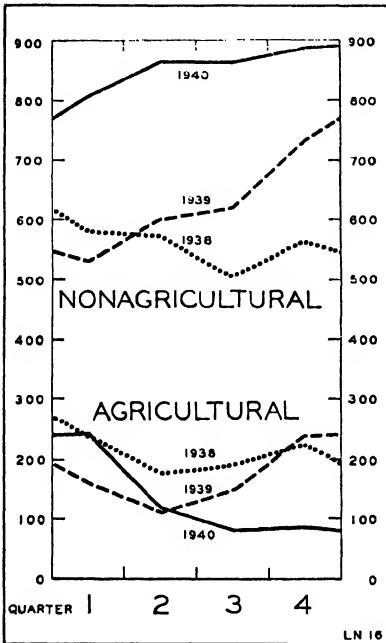
The quantum of United States exports of manufactured goods in 1940 reached the previous record level of 1929 and the dollar

<sup>1</sup> Since the beginning of 1941, even the publication of global trade figures has been discontinued.

<sup>2</sup> *The Statist*, October 26th, 1940.

Diagram 2.

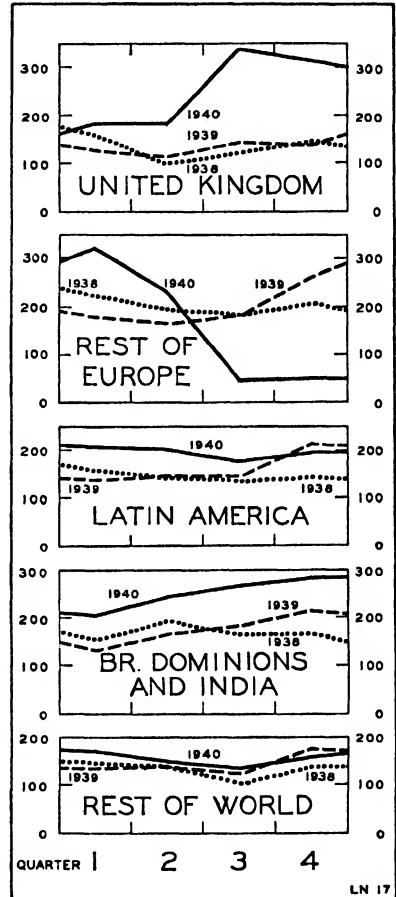
United States: Quarterly Exports of Agricultural and Non-agricultural Products, in \$(000,000's)



value was only 8% lower than in that year. The coincidence of the almost unprecedented advance of industrial exports with the failure of agricultural exports, the physical volume of which during the latter part of 1940 was at its lowest point since 1869,<sup>1</sup> is illustrated in Diagram 2. The reduction in agricultural exports was more than outweighed, however, by the rise in exports of other goods, and the total export value increased in 1940 by 26%, prices being 6% up and quantum 18%.

Diagram 3.

United States: Geographical Distribution of Exports, in \$(000,000's)  
General Exports; Quarterly Movement.



<sup>1</sup> Cf. *Survey of Current Business*, February 1941, page 53. It is pointed out that the course of trade differed strikingly from that during the 1914-1918 war, when the European demand caused a great expansion in the production and exports of agricultural products with the exception of cotton.

A portion of this increase is accounted for by sales to non-industrial countries, particularly in Latin America, but by far the biggest share was absorbed by the United Kingdom (*cf.* Diagram 3). The value of exports (including re-exports) to that country during 1940 amounted to \$1,010 million, or exactly twice the corresponding figure for 1939. The increased part played by the British Commonwealth of Nations in United States exports particularly from the middle of 1940 is brought out by the following figures :

	1939		1940		1941
	I-VI	VII-XII	I-VI	VII-XII	I-IV
Percentage share in U.S. exports absorbed by:	%	%	%	%	%
1. United Kingdom.....	16	22	17	33	30
2. Canada.....	14	16	16	21	19
3. Other parts of the British Commonwealth of Nations and Colonial Empire.....	8	8	8	10	13
Total.....	38	46	41	64	62
4. Latin America (less areas included under 3).....	19	19	17	18	19
5. All other countries.....	43	35	42	18	19
All countries.....	100	100	100	100	100

From the end of 1940, when the United States purchases of raw materials gained pace, the export surplus with numerous non-industrial countries was replaced by an excess of imports. The change was most noticeable in the case of South America: imports from that area during the three months ending February 1941 amounted to \$149 million or 21% of United States total imports during the three months ending February 1941 as against \$105 million or 15% during the corresponding period one year earlier. Exports to South America, however, fell from \$120 million to \$90 million:

United States (general) trade with:	\$(000,000's)					
	XII 1939-II 1940			XII 1940-II 1941		
	Imports	Exports	Balance	Imports	Exports	Balance
United Kingdom and Canada.....	126	305	+ 179	144	484	+ 340
Continental Europe.....	108	317	+ 209	31	43	+ 12
Mexico and Caribbean.....	60	88	+ 28	68	97	+ 29
South America.....	105	120	+ 15	149	90	- 59
Rest of World.....	290	255	- 35	323	237	- 86
Total.....	689	1085	+ 396	715	951	+ 236

For the year 1940 as a whole, the share of the United States in the trade of the Latin American republics was 51% as against 34% during the last year of peace (1938). The share of the United States in the exports of the same countries was 43 and 30%, respectively. The increase had taken place, of course, at the expense of European countries, particularly Germany.

Country	Imports				Exports			
	\$(000,000's)		Percentage share from U.S.A.		\$(000,000's)		Percentage share to U.S.A.	
	1938	1940	1938	1940	1938	1940	1938	1940
Argentina.....	443	395	17.6	29.1	438	430	8.1	17.5
Brazil.....	296	251	24.2	51.9	296	264	34.3	42.3
Chile.....	103	104	27.7	47.9	139	140	15.7	58.3
Cuba.....	106	94	70.9	78.0	143	115	76.0	82.4
Mexico.....	110	124	57.7	*76.1	188	176	67.4	89.5
Venezuela.....	96	*(73)	58.7	<sup>b</sup> 67.3	274	*(202)	13.6	<sup>b</sup> 19.1
Colombia.....	89	85	51.3	74.4	83	95	59.1	69.8
13 Other Republics <sup>c</sup> ....	248	<sup>d</sup> 239	34.8	<sup>d</sup> 51.0	269	<sup>d</sup> 266	27.6	<sup>d</sup> 41.9
Total.....	1490	<sup>e</sup> 1390	33.9	51.4	1830	<sup>e</sup> 1755	30.3	42.7

<sup>a</sup> January-September.

<sup>b</sup> January-June.

<sup>c</sup> Bolivia, Costa Rica, Dominican Republic, Ecuador, Guatemala, Haiti, Honduras, Nicaragua, Panama, Paraguay, Peru, El Salvador, Uruguay.

<sup>d</sup> Partly estimated.

<sup>e</sup> Including the estimated trade of Venezuela during October-December.

The increased United States sales to the United Kingdom and Canada were largely on account of materials for the armament industry (chiefly crude steel products and machine tools) and of aircraft and arms. Exports of foodstuffs and tobacco were reduced to small proportions. The change in the composition of exports to the United Kingdom is strikingly illustrated by the annual figures for the years 1938-1940<sup>1</sup> given in the table on the opposite page.

Of the total increase in United States exports (to all countries), steel products accounted for 35%, machine tools for 17%, aircraft for 24% and firearms, ammunition and explosives for 9%. The

<sup>1</sup> Source: *Foreign Commerce Weekly* (U.S. Department of Commerce), April 12th, 1941.

United States exports to the United Kingdom:	\$(000,000's)			Percentage of total		
	1938	1939	1940	1938	1939	1940
1. Iron and steel mill manufactures . . . . .	13	15	154	2	3	16
2. Non-ferrous metals . . . . .	11	20	60	2	4	6
3. Metal-working machinery . . . . .	16	33	133	3	7	13
4. Aircraft, including engines and parts . . . . .	4	35	135	1	8	14
5. Motor trucks and busses; merchant vessels . . . . .	3	1	33	—	—	3
6. Firearms and ammunition . . . . .	1	—	50	—	—	5
Total 1-5 . . . . .	48	104	565	8	22	57
7. Foodstuffs and tobacco . . . . .	248	138	74	48	28	7
8. All other products . . . . .	218	257	254	44	50	36
Total 1-7 . . . . .	514	499	993	100	100	100

aggregate export value for these articles rose by 144% and that of all other goods by only 5%.

United States exports of:	\$(000,000's)		change	1940 as percentage of 1939
	1939	1940		
1. Iron and steel semi-manufactures and steel mill manufactures . . . . .	235	516	+281	219
2. Non-ferrous metals and manufactures . . . . .	227	306	+ 79	35
3. Metal working machinery . . . . .	117	256	+139	219
4. Aircraft, including parts . . . . .	117	312	+195	267
5. Other machinery and vehicles . . . . .	661	744	+ 83	113
6. Firearms, ammunitions, explosives . . . . .	10	85	+ 75	850
7. Other non-agricultural products . . . . .	1,101	1,199	+ 98	109
8. Agricultural products . . . . .	655	517	-138	79
All goods . . . . .	3,123	3,935	+812	126
Of which nos. 1, 3, 4 and 6 above . . . . .	479	1,169	+690	244
“ 2, 5, 7 and 8 above . . . . .	2,644	2,766	+122	105

In the American iron and steel industry, working at close to full capacity, the proportion of ingot output exported was larger than at any time in recent years and considerably more than half the exports was absorbed by the British Empire; the machine tool industry, which was also working at close to capacity, exported more than half its total output, nearly all to the Empire.<sup>1</sup> Exports of arms proper to British countries was limited chiefly by the shortage of supply. While in 1940 actual exports of arms (including aircraft and vessels

<sup>1</sup> Cf. *Federal Reserve Bulletin*, January 1941, page 8. Normally, the United States steel exports amount to only a few percent of the production.

of war) to the United Kingdom, Canada, the Union of South Africa, the Gold Coast and Australia totalled \$214 million, licenses issued for such exports amounted to \$756 million. Corresponding figures for exports to other countries were \$115 million and \$117 million.

Japan is a bigger export market for the United States than any other non-European country except Canada. Exports to Japan in 1940, however, amounting to \$227 million, did not fully reach their level of 1939, as they were curbed in the course of the year by the licensing system imposed upon the export of various goods which Japan required for her armament industry and her warfare in China and had imported in increasing quantities at the expense particularly of her purchases of cotton. The chief embargoes were those placed in July on aviation gasoline and in October on iron and steel scrap. Gasoline of a lower grade continued to be shipped. The freezing of Japanese assets in the United States late in July 1941 and fresh export restrictions introduced early in August are likely, however, to reduce United States exports of petroleum products to Japan.

In 1940, for the first time in a number of years, the United States exported cotton to the U.S.S.R., which country is believed to have exported cotton to Europe out of its domestic production.

United States exports of cotton, in bales (000's), to:	VIII '39-III '40	VIII '40-III '41
United Kingdom.....	1,637	344
U.S.S.R.....	0	139
Canada.....	293	126
Japan and China.....	1,129	103
Other countries.....	2,284	118
<b>Total.....</b>	<b>5,343</b>	<b>830</b>

Canada profited in her trade from her nearness to the United States on the one hand and the fact that she is also nearer to the United Kingdom than are other British Dominions. There was a steady increase in her imports from the United States, and a steady rise in her exports to the United Kingdom—both features reflecting Canada's outstanding part in the war effort of the British Commonwealth of Nations.

The rise in imports from the United States was largely on account of machinery and rolling-mill products, required by the newly established armament industry. But as in the United States, the export of



Table 4.—Trade of Canada, in \$ Can. (000,000's).

Trade with:	Imports				Exports (domestic)			
	1939		1940		1939		1940	
	I-VI	VII-XII	I-VI	VII-XII	I-VI	VII-XII	I-VI	VII-XII
United States.....	205	292	338	406	145	235	192	251
United Kingdom.....	55	59	73	88	152	175	248	260
Other countries of the British Commonwealth of Nations.....	31	44	49	57	51	52	61	87
Other countries.....	30	36	36	35	56	39	47	33
Total.....	321	431	496	586	404	521	548	631

*Note.* When reading this table, account should be taken of the fact that the Canadian dollar depreciated in terms of the United States dollar by about one-tenth from the autumn of 1939.

munitions during the period under review naturally did not rise to the planned future level. The recorded exports consisted largely of semi-finished iron products, non-ferrous metals, timber and pulp.

Japan, even under the favourable competitive conditions she enjoyed in 1940, was unable to regain the losses she had suffered in her export trade since 1937 as a result of the strain she placed on her economy by her campaign in China. The yen value of Japanese exports rose in 1940, but not sufficiently to offset the depreciation of the yen, and a considerable decline occurred in the weight of a number of her major exports. Thus during the first eight months of 1940<sup>1</sup> weight (or quantity) of raw silk exported was 31% lower than during the corresponding period of 1939, of cotton yarns 33%, of gray cotton piece goods 34%, of other cotton piece goods 18% and of refined sugar as much as 75%. Stocks of cotton piece goods available for export rose, however, and towards the end of 1940 are estimated to have represented one million bales of raw cotton. Simultaneously imports increased, in spite of the restricted purchases of products which, like raw textiles, mainly serve peace-time needs. Attempts were made to curtail exports to the "yen bloc". These had risen rapidly during recent years and the export surplus which resulted could not be used for effecting purchases elsewhere. But in fact these exports continued to rise and the whole deterioration in the trade balance occurred in commerce with other countries:

<sup>1</sup> Later detailed information is not available at the time of writing.

Table 5.—General Trade of Japan

	Yen (000,000's)							
	Trade with "yen bloc" <sup>a</sup>				Trade with other areas			
	1937	1938	1939	1940 <sup>b</sup>	1937	1938	1939	1940 <sup>b</sup>
Imports...	438	564	683	715	3,345	2,099	2,234	2,700
Exports...	791	1,166	1,747	1,865	2,384	1,524	1,829	1,800
Balance...	+ 353	+ 602	+ 1,064	+ 1,150	- 961	- 575	- 405	- 900

*Note.* The average exchange value of the yen was 28.7 U.S. cents in 1937, 28.4 in 1938, 26.0 in 1939 and 23.4 in 1940.

<sup>a</sup> Manchuria, Kwantung and China (trade with Korea and Formosa is not recorded).

<sup>b</sup> Approximate figures (Chief source; *International Reference Service*, U.S. Department of Commerce, No. 33, June 1941).

In view of the exchange control established between the countries of the sterling area and the outside world, and the relative freedom of exchange transactions existing within the sterling area, the settlement of the international accounts of that area is of particular importance. The merchandise trade of the whole area resulted in a heavy deficit, which was augmented by various credit operations and had to be met largely by the liquid gold and dollar assets of the United Kingdom. The gold and dollar transactions of the sterling area during the period September 1939-December 1940, as shown elsewhere in this volume,<sup>1</sup> may be summarized as follows. Merchandise trade with the United States (not including freights or advance payments for goods not yet delivered) resulted in a deficit of \$955 million, which figure is raised to \$1,030 million by the inclusion of minor service items. The corresponding deficit with Canada amounted to \$555 million, and with other countries outside the sterling area to \$500 million. (This sum of \$500 million appears to include certain items on capital account.) The deficit on these items totals 2,085 million. After deducting receipts from sales of currently mined and dishoarded gold, \$965 million, there remains a net deficit, chiefly on "current account", of \$1,120 million. This sum was not the only one to be met through liquidation of the gold and dollar resources held at the beginning of the period; for the repayment of various credits and the exodus of capital through the sale of free

<sup>1</sup> Pages 136-37.

sterling, after deducting capital inflow from Canada (\$330 million), required \$405 million, advance payments on British government orders, \$570 million, and financial assistance to American firms requiring new plant facilities, \$150 million. The liquidation of gold and dollar holdings for the two last-mentioned payments (advance payments and financial assistance) obviously only represented the exchange of one type of asset for another. The total drain on the British liquid assets, according to these figures, should have been \$2,245 million; the difference between that amount and the recorded decline in these assets (\$2,316 million) is entered as "miscellaneous items and errors of estimation". The United Kingdom holdings of gold and United States dollar balances were thus reduced from \$2,633 million to \$651 million and the value of United Kingdom long-term investments in the United States from \$1,815 million to \$1,516 million.<sup>1</sup> During the early part of the period considered, the assets were drawn upon largely for the settlement of outstanding credits, but with the increased impact of the war effort towards the end of 1940 the bulk of the drainage that occurred and threatened to continue on an increased scale was required to meet the deficit on current account. In March 1941 the United States Congress passed the so-called "Lend-Lease" Act permitting the President of the United States to manufacture or procure and sell, lend or lease defence articles to foreign governments whose defence the President deems vital to the defence of the United States.<sup>2</sup>

Within the sterling bloc, there naturally was a considerable strain on the United Kingdom, whose total trade deficit rose from £387 million in 1938 to £406 million in 1939 and £669 million in 1940. It is not possible from the published information to ascertain the deficit of her trade within the sterling area alone. The rise was offset to a certain extent by the fact that the higher freight rates implied an increase in the shipping income at the same time as they raised the recorded import value. According to estimates by the British Chamber of Shipping, the net shipping income (on account of both import and export freights) rose from £90 million in 1938 to £100 million in 1939 and £200 million in 1940.

<sup>1</sup> British figures differ slightly from those compiled in the United States. Of the gold and dollar balances at the end of 1940, \$351 million were considered "unavailable".

<sup>2</sup> The "Lend-Lease" Act of 11th March provided for the transfer of defence articles, to be taken from existing Government property or procured with funds previously appropriated, to the value of \$1,300 million. The "Defense Aid Supple-

During 1938 the trade deficit of the United Kingdom is estimated to have been covered to the extent of £55 million by the sale of gold or by net capital imports. This sum thus represents the deficit on account of the "current" items in her balance of payments. This deficit is likely to have risen in 1939 and, of course, much more in 1940. Inward and outward capital movements were considerable and offset each other to a large extent. On the one hand, there was a considerable capital export in the form of withdrawals of foreign deposits before this exodus was stopped through the tightening of the exchange control, and, moreover, new credits were granted, chiefly by the Government. Mention may be made of credit of £43½ million extended to Turkey by the British and French governments at the beginning of the war, of £5 million granted to Greece in November 1940, of £5 million to China late in 1940, with the concurrence of the Dominion governments, for purchases within the sterling area, and of a further sum of £5 million in April 1941 for the Chinese Stabilization Fund originally set up with £10 million under British government guarantee in 1939. On the other hand, capital entered the United Kingdom both as a result of the liquidation of investments and in the form of deposits by countries of the sterling bloc. The sale of investments was not confined to those in the United States and Canada referred to above; India, for example, has begun the repatriation of Indian railway stocks and bonds in British hands, and New Zealand repaid British loans on maturity. The accumulation of foreign short-

mental Appropriation Act" of 27th March appropriated \$7,000 million to carry out the purposes of the Act for the period up to June 30th, 1943, of which :

(i) To be spent for goods:		\$(000,000's)
Aircraft and equipment .....	2,054	
Agricultural and industrial goods .....	1,350	
Guns, ammunition and supplies .....	1,343	
Ships and supplies .....	629	
Tanks and automotive equipment .....	362	
Miscellaneous military equipment .....	260	
		<hr/> 5,998
(ii) To be spent for services:		
Testing and repair of defensive articles .....	200	
Administrative expenses .....	10	
Other services and expenses .....	40	
		<hr/> 250
(iii) Capital expenditure: plant and equipment for the production of defence articles		<hr/> 752
		<hr/> 7,000
Total		

The supplies actually shipped during the first 80 days of the programme and financed by this appropriation amounted to \$75 million. By the end of August the amount had risen to \$190 million.

term balances in London has resulted largely from the British purchase agreements referred to above and the clearing and other trade accounts in operation with a number of neutral countries. The inflow of short-term capital from the "Empire" countries alone is estimated to have proceeded during the war at the rate of about £150 million per annum.<sup>1</sup> The surplus accruing to the Netherland Indies from transactions with the sterling bloc and deposited in London has been estimated at 100 million guilders per annum.<sup>2</sup> Another inflow of funds originates in the earnings of vessels belonging to invaded European countries but operating between ports of the sterling area. A substantial portion of the capital inflow, however, is the counterpart of British payments for goods not entering into import returns and thus cannot be regarded as offsetting the recorded trade deficit.

Canada's position during the last few years preceding the war was that of a capital-exporting debtor country. Her current transactions with the United Kingdom and other parts of the British Commonwealth of Nations resulted in a considerable surplus, which was used in part in the redemption of debt and in part to offset the deficit on current account with the United States. Though Canada's participation in the war effort increased her dependence on imports from the United States, she reduced to a minimum her demand for payments in gold or dollars in respect of her export surplus to the sterling bloc. The following statement by the Canadian Prime Minister in the Dominion House of Commons on March 25, 1941, shows the nature of Canada's exchange problems and the relative magnitude of the amounts involved:

"Britain, of course, cannot herself find all the necessary dollars with which to pay for her enormous purchases of Canadian products. For the new fiscal year,<sup>3</sup> Britain's deficit in her balance of payments with Canada is now estimated at over \$1,150 million. Canada must provide Britain with the Canadian dollars to meet this deficit, either by purchasing Canadian securities now held in Britain, or by the accumulation of sterling balances. In this connection, it may interest the house to know that from September 15, 1939, to the end of February this year, the United Kingdom's deficit with Canada amounted to approximately \$737 million. Of this deficit, Canada provided 45 per cent by the repatriation of securities, and 21 per cent by the accumulation of sterling balances in London, while only 34 per cent was met by the transfer of gold. During the six-months' period ending February 28 last, Britain's deficit with us was \$359 million, and Canada financed the whole of that deficit, except for \$65 million which was covered by gold shipments. Since the early part of December, no gold has been received from the United Kingdom. I wish to emphasize the fact that whatever gold, or United States exchange, Britain

<sup>1</sup> Cf. *The Banker* (London), March 1941 ("The Settlement of Inter-Empire Payments").

<sup>2</sup> Cf. *Foreign Commerce Weekly* (U.S. Dept. of Commerce), April 5th, 1941.

<sup>3</sup> Beginning April 1st, 1941.

makes available to Canada is for one purpose only, and that purpose is to enable Canada to make payments to the United States for war purchases."<sup>1</sup>

Canada's trade deficit with the United States, which rose from \$115 million in 1939 to \$300 million in 1940, and her net outward payments of interest and dividends to the same country which in 1937—the last year for which information is available—amounted to \$200 million, has been met during the war chiefly by the sale of gold (currently mined or acquired from the United Kingdom) and by the income from United States tourists—an item, however, that proved to afford a much smaller contribution to the Canadian balance of payments than had previously been assumed.<sup>2</sup> Finally, Canada liquidated a portion of her dollar assets. In December 1940, Canada found it necessary to prohibit the import of certain non-essential products involving the use of United States dollars; on the other hand, she reduced or abolished tariffs on a wide range of goods imported from the British Empire. The rather paradoxical situation in which heavy capital exports in one direction (the United Kingdom) coincided with scarcity of exchange and capital imports in another (the United States) was typical of the reduction of triangular trading that affected the international transactions of many countries. In April 1941 Canada's exchange problem was eased by an agreement with the United States providing for the delivery by the United States to the United Kingdom under the Lend-Lease Act of materials destined to enter into Canadian-produced war equipment for that country and for the purchase by the United States of war equipment from Canada to the value of \$200-300 million in the course of the following twelve months.

With the adoption of exchange control by the countries of the sterling area and the events in Continental Europe, the United States dollar became the only "free" currency of importance. According to

<sup>1</sup> The following supplementary information was contained in a speech of April 29th by Canada's Minister of Finance. During the 12 months ending March 31st, 1941, the deficit which the United Kingdom was called upon to meet in its payments with Canada amounted to \$795 million. Of this, \$250 million was met by shipments of gold, \$337 million by repatriation of Canadian securities held in the United Kingdom and the balance of \$208 million by the accumulation of sterling balances in London. Canada's deficit in its payments with the United States during the same period amounted to \$478 million.

<sup>2</sup> A comprehensive enquiry by the Dominion Bureau of Statistics showed a net receipt in the tourist traffic with the United States of \$82 million and with all countries of \$85 million. Calculated on the same basis, the net receipt from all countries during 1939 works out at \$78 million. The previous estimate for that year, based on less complete information, was \$166 million, or more than twice the revised figure.

the official estimate of the balance of payments of the United States given in the following table, the surplus on current account ("trade and service items") doubled in 1940, owing to the heavy increase in the export surplus and the reduction in the expenditure of United States tourists abroad. The great bulk of this surplus was earned in trade with countries of the British Commonwealth of Nations (principally the United Kingdom and Canada) and was offset by a reduction in British gold and dollar assets. Net gold imports, after deduction of gold earmarked for foreign account, were three times as great,

*Table 6.—United States: Balance of International Payments.\**

*Note:* The plus sign (+) means a net inward or credit movement of payments, and the minus sign (—) a net outward or debit movement.

Item	\$ (000,000's)	
	1939 (unrevised)	1940 (preliminary)
Trade and service items:		
Merchandise.....	+ 859	+1,396
Freight and shipping.....	— 124	— 104
Travel expenditures.....	— 299 <sup>b</sup>	— 142
Personal remittances and institutional contributions ..	— 142	— 145
Interest and dividends.....	+ 320	+ 310
Government transactions.....	— 64	— 94
Miscellaneous services and adjustments.....	+ 108	+ 98
Total trade and service items.....	+ 658	+1,319
Gold and silver:		
Gold (import balance).....	—3,574	—4,744
Gold earmarking operations.....	+ 534	+ 645
Silver (import balance).....	— 71	— 55
Total gold and silver movements.....	—3,111	—4,154
Known capital items:		
Long-term capital movements.....	+ 114	— 53
Movement of short-term banking funds.....	+1,116	+ 873
Advance payments and capital assistance by British Government.....	—	+ 720
Miscellaneous capital items.....	+ 69	— 170
Paper currency movements.....	+ 117	+ 33
Total capital items.....	+1,416	+1,403
Other transactions and residual <sup>c</sup> .....	+1,037	+1,432

\* Source: *Foreign Commerce Weekly* (U.S. Department of Commerce), March 29th, 1941.

<sup>b</sup> This figure is believed to be too high, since no account has been taken of the revision of the estimate of the expenditure of United States visitors to Canada (*cf.* above).

<sup>c</sup> This item is believed to represent chiefly unrecorded capital imports.

however, as the surplus on current account. Their magnitude was due in part to the withdrawal of United States assets abroad, to the inflow of funds from Continental Europe at the time when transfer facilities still existed, and to advance payments and financial assistance to American firms by the United Kingdom. The record of capital transactions is far from complete, and the residual shown in the last line of the table, exceeding the surplus of merchandise exports, is believed to represent chiefly inflow of capital not accounted for in the preceding items.

In the international accounts of numerous raw material exporting countries outside the sterling area, credits raised in the United States became of considerable importance during 1940 and 1941. In particular the United States Export-Import Bank granted a number of loans and credits to Latin American countries, including the Argentine, Brazil, Chile, Colombia and Peru.<sup>1</sup> The credit requirements of Latin American countries were due in part to the unfavourable conditions for their principal export products. The export surpluses of the Argentine and Brazil fell off seriously:

Surplus of exports (+) or imports (—)	U.S.A. \$(000,000's)											
	January-June				July-December		Whole Year					
	1939	1940	1939	1940	1939	1940						
Argentina.....	+	74	+	52	+	40	—	28	+	114	+	24
Brazil.....	+	16	+	2	+	29	+	11	+	45	+	13

The principal change in the trade balance occurred in commerce with the United States. The Argentine's net imports from the United States rose steeply in 1940 and the previous export surplus of Brazil with the United States was turned into a deficit. A factor of particular importance was the difficulty of triangular settlement of trade balances. The proceeds of exports to the United Kingdom were paid into special accounts which as a rule could only be employed for payments to that country (for instance, for imports). Thus, certain Latin American countries accumulated sterling funds which could neither be used for financing imports from the United States nor be sold to other Latin American countries that were "short of sterling". To the extent that the credits raised in the United States enabled the borrowing countries to export more to the United Kingdom than they purchased there, it may be said that they helped to finance British imports from Latin America. The strain on the international accounts of

<sup>1</sup> See Chapter V, page 145 above.



certain of the countries in question was, however, only partly relieved. The Argentine, for example, accumulated a considerable sterling balance in 1940 but was faced by a deficit with countries outside the sterling area which necessitated the export of gold to the value of 244 million pesos (\$64 million) during 1940. In Brazil, on the other hand, the exchange situation presented no serious difficulties, owing partly to an influx of European funds.

#### TRADE IN CONTINENTAL EUROPE.

From the middle of 1940, the trade of Continental Europe naturally centred largely around Germany. Before the war, Germany together with Austria accounted for well over a quarter of both the imports and the exports of the continent. About half of Germany's import and two-fifths of her export trade were, however, conducted with non-European countries and those European countries with which Germany entered into war in 1939. During the early months of the war, therefore, Germany's trade is estimated to have fallen by not far from a half. Subsequent events led to an expansion of Germany's trade, but particularly of her imports from European countries. According to Press reports of a public statement made early in 1941 by Dr. Rudolf Eicke of the Reichsbank, Germany's foreign trade had by the end of 1940 reached its pre-war level, through the expansion of commerce with other European countries, including the U.S.S.R. As Germany was cut off from non-European markets this implies that Germany's trade with Continental Europe increased some 70% above its level in 1938.<sup>1</sup>

Simultaneously, the total trade of other European countries declined in value by about a third, and the share of Germany in their turnover increased rapidly. Germany's share in the exports of the Netherlands, which had been 13% in 1939, amounted to 86% in the third quarter of 1940. The corresponding import figures are 24 and 55%. Germany's share in Sweden's trade is estimated to have risen from a normal 20% to around 70%, and in the trade of south-eastern Europe the German market appears to have become even more predominant.

Germany's transactions with the areas she had occupied were, of course, carried on largely under military pressure and a substantial

<sup>1</sup> At the general meeting of the Reichsbank on March 12th, 1941, it was revealed that during 1940 Germany's trade with European countries except France and the United Kingdom had increased in value by about 65% above the level of 1939.

portion of the goods moved from these areas hardly falls under the category of "trade" in the usual sense of that word. Even in exchange with European countries not under her military domination, Germany was able from the middle of 1940 to use strong pressure. While Germany's central geographical position in Europe facilitated her trade with the surrounding countries, trade between these countries became largely dependent upon the facilities of rail transport through Germany or through German-occupied territory. Moreover, through her military conquests, Germany came to control the supply of essential commodities such as coal and steel, at the same time as she became the only outlet of importance for numerous products exported by other European countries. She was thus frequently in a position to dictate the conditions under which the exchange of goods might take place.

In the countries occupied by Germany, goods were seized or requisitioned on a large scale. In Poland and France large quantities of industrial equipment, besides primary goods and articles of consumption, were seized and transferred to Germany. Stocks of materials established in smaller countries for domestic use during the war fell into German hands. Part of the goods requisitioned was naturally consumed or held by the occupying forces and thus though entering German possession was not technically imported.

The livestock in the invaded countries in excess of what could be maintained if foreign supplies of feeding stuffs and fertilizers were cut off constituted a form of food reserve which was taken over as quickly as possible by Germany. For example, Denmark and the Netherlands had after the invasion to slaughter a large proportion of their animals owing to lack of fodder and export the meat to Germany, or sell on the hoof.<sup>1</sup> The following figures for Danish exports of live pigs are illustrative:

*Table 7.—Danish Exports of Live Pigs. Head (ooo's)*

Year	Quarterly average	1940, 1st. Quarter . . . .	35.6
1938 . . . . .	34.5	2nd. " . . . .	116.7
1939 . . . . .	34.2	3rd. " . . . .	393.4
1940 . . . . .	188.4	4th. " . . . .	209.5

By reducing the high premia she had previously granted to exporters, and by other devices, Germany was able to improve her terms of

<sup>1</sup> For the related data on production, see Chapter VI above.

trade with the occupied countries, which had obviously small possibilities of resisting German demands. Thus, late in 1940 Norway and Denmark are reported to have had to pay 20% higher prices for German goods than Sweden, and Germany is reported to have refused to pay higher prices for Norwegian goods than those prevailing before her invasion of Norway.<sup>1</sup> It should be observed, however, that even in her trade with unoccupied countries, Germany abolished export premia and raised the export prices of numerous goods, and further, that she had to allow higher prices on certain goods she required even from occupied countries in order that the supply should not fall off rapidly. A case in point is Danish butter, the export price of which was raised; but the increase by no means equalled that demanded for imports from Germany. Between August 1939 and September 1940 the index of Danish import prices rose by 86% but that of Danish export prices by only 40%.

In order to ensure the functioning of her clearing agreements with a number of countries of south-eastern Europe, Germany had before the war had to allow the exchange value of the mark, in trade with these countries, to fall considerably below its official level. With the increased bargaining power of the Reich during 1940, that exchange value was raised so as to confine the discount on the mark to around 20%—a step which involved a considerable improvement in Germany's terms of trade with the countries in question.

Before the war the occupied countries of Northern and Western Europe had an excess of imports from Germany. As Germany drained them of their resources after the invasion, this balance appears to have been reversed. As an example may be mentioned the Netherlands—in fact the only country for which adequate recent statistical information is available. During the four months January-April 1940 inclusive, her trade with Germany resulted in an import surplus of 56 million gulden, but during the four months June-September 1940 in an export surplus of 43 million gulden (Diagram 4). One of Germany's chief devices for financing net imports from the countries she had invaded was the creation of heavy claims under the head "occupation costs". The amount of such tributes claimed from France, Belgium, the Netherlands and Norway alone exceeded \$4,000 million (calculated on an annual basis).<sup>2</sup> As actual expenditure by the occupying armies in the territories concerned was much less, a large surplus arose upon which Germany could draw in payment for imports.

<sup>1</sup> Cf. *The Economist*, January 4th, 1941.

<sup>2</sup> Cf. page 156.



*Diagram 4.*  
*The Netherlands: Trade with*  
*Germany, January-September*  
*1940.*

In gulden (000,000's)

The surplus was not wholly utilized for this purpose, however, but was in part left on deposit with the paying countries or used for the acquisition of financial interests there.

In Denmark, which appears formally not to be charged with "occupation costs", these costs were nevertheless financed by the Danish National Bank, whose credits to Germany on this account, judging from the rise in its claims on "various debtors", amounted to around 400 million Danish Kroner (\$77 million) from May 1940 to the end of the year. Part of this amount represents goods bought in Denmark by German soldiers and sent to Germany.

In spite of the expansion of imports rendered possible by the methods of financing now described, Germany has also had recourse to imports on credit in the form of clearing balances arising with occupied countries. In the course of the last three quarters of 1940, the Danish clearing balances changed from a net debit of 43 million Danish Kroner to a net credit of 412 million (\$79 million). By the end of February 1941 the amount had risen to 488 million Kroner. These balances refer to all countries, but the change was due almost wholly to trade with Germany. Clearing balances of the magnitude indicated due to a country as small as Denmark would normally lead to the collapse of trade, owing to the length of the period elapsing before exporters were paid. In the prevailing conditions, however, the Danish National Bank has had to pay exporters in the form of bank notes or credit without waiting for settlement from Germany.

A similar procedure was applied in other cases. Thus, owing to the large sums which Belgium was owed as a result of her trade with Germany an arrangement was reached in the autumn of 1940 per-

mitting the Belgian National Bank to effect advance payments to exporters amounting to 1,000 million Belgian francs (\$34 million). Similarly, in the Netherlands, whose clearing claim on Germany before the war had been liquidated and replaced by a debt early in 1940, a new clearing claim on Germany arose after the invasion and the Treasury was compelled to grant advances for the payment of the claims of exporters. Through arrangement with Germany, similar advances appear to have been paid in Slovakia and Bulgaria. In the former of these two countries an aggregate clearing claim on Germany and "the Protectorate" exceeding 1,000 million crowns (about \$35 million) had accumulated early in February 1941.

Sweden's and Switzerland's clearings with Germany appear to have been influenced by tendencies similar to those operating in the case of the Netherlands. At the outbreak of war Switzerland had a clearing claim on Germany of about 125 million Swiss francs (\$28 million); but this balance is reported to have been liquidated and replaced by a clearing debt in the early part of 1940. Later during that year, however, the Swiss import surplus from Germany fell off, and in July 1940, for the first time, Switzerland exported more to Germany than she imported from that country. In Sweden, which before the war had experienced certain difficulties in collecting the payments due to her by Germany, there arose a clearing balance due to Germany amounting to 170 million kronor (\$40 million) in May 1940. Later, this balance fell off and by the summer of 1941 it had turned into a clearing debt to Sweden.

During the autumn of 1940, certain countries of south-eastern Europe became indebted to Germany on clearing account. The balance in clearing between Germany and Yugoslavia, which for long had been in favour of Yugoslavia, was turned into a deficit in October 1940 and by March 15th, 1941, amounted to 66 million marks. A considerable German clearing claim on Hungary is also reported to have arisen.

These changes were due partly to the failure of crops in the Danubian region in 1940. The wheat harvest was so poor that in certain areas maize had to be used in its place and both wheat and maize exports consequently fell. Roumania's exports were adversely affected also by the annexation of Bessarabia, the only district which had a good harvest, by the U.S.S.R. The effect of the reduced sales of grain upon the balance of trade undoubtedly facilitated the revaluation of the mark in terms of the currencies of Danubian countries to which attention was drawn above.

The fact that this revaluation was carried out so as to bring about a common valuation of the mark (about 20% below parity) in the various countries concerned has been referred to as one of the steps taken by Germany in a general endeavour to create a system of multilateral clearing between European countries. It is obvious that such clearing would not function properly unless there were a uniform valuation of each of the currencies involved in all the participating countries.

The clearing system that actually developed under German auspices up to the beginning of 1941 provided for a global clearing of any mercantile claims or liabilities which Italy, Hungary, Yugoslavia, Greece, Bulgaria, Switzerland, and to a more limited extent France, Slovakia, Sweden, Denmark and Finland, might have on Belgium, the Netherlands, Norway and the Polish "Government-General". Italy, for example, was able to offset clearing debts to any of these four occupied areas with claims on the others. The accounting was effected in marks by a central clearing office in Berlin.

This arrangement did not constitute anything like a general multilateral settlement of European clearing balances as only the balances of the four occupied areas mentioned were merged into a common fund. It was, of course, imposed by Germany and no country maintaining its sovereignty has agreed to effect, through Berlin, triangular payments resulting from its trade with other independent countries.

A number of other arrangements for triangular settlement, on a limited scale, have been made in Europe during the war, as during the few years preceding it. But the general problem of multilateral settlement of balances remains unsolved.

The reduction in trade with countries outside Europe and the changes that have taken place in trade with Germany have naturally reversed the general balance of trade of certain European countries. The import balance of certain creditor countries, after rising to a high level during the early months of the war, fell off in the course of 1940. That of the Netherlands in the third quarter of the year amounted to only \$13 million, as against \$61 million in the corresponding quarter of 1939. Switzerland, in the same quarter of 1940, found herself faced with an export balance—a phenomenon which had not occurred since 1925. France's trade with Germany from the middle of 1940 is believed to have resulted in a heavy excess of exports, unlikely to have been offset by net imports from the French possessions in North Africa. Similar movements occurred in certain debtor countries. Denmark during the second half of 1940 had an excess of exports of \$29 million as against an excess of imports of

\$23 million in the corresponding period of 1939. But in some cases, the opposite tendency prevailed: in Hungary, which used to have an export surplus, an excess of imports arose in the middle of 1940.

The highly developed countries of north-western Europe invaded by Germany undoubtedly suffered most from the disturbances in their trade. Their tributes they had to pay and credits to extend to Germany greatly weakened their economy. Italy's plight from the time she entered into the war was also severe, as she was deprived of oversea supplies essential to her industry. She is believed to have maintained her trade at about 40% of its pre-war level, thanks to her exchange of goods with Germany and south-eastern Europe. Since March 1940 she has obtained about one million tons of coal monthly by rail from Germany<sup>1</sup>—a traffic which put a great strain on the railway connection between the two countries. Her dependence upon the supply of other goods from Germany also greatly increased. She enjoyed, however, a bumper crop of rice in 1940, leaving a surplus available for export.

Sweden's trade was influenced by the financial assistance she gave to Finland during and immediately after the Finno-Russian war. Her gifts and credits to that country amounted to some 840 million kronor (\$200 million). With the disruption of the Skagerrak traffic from April 1940 Sweden endeavoured to develop her trade with the U.S.S.R. and granted that country a mercantile credit of 100 million kronor in September. Nevertheless, Germany came to occupy a much higher share in Sweden's trade than ever before. Switzerland has been able to maintain her trade on a remarkably high level. With large sales to Germany, exports during the last half of 1940 rose to a higher value than during the corresponding period of 1939; her imports, on the other hand, fell off by a third.

Being suppliers of primary goods, the agricultural countries of south-eastern Europe were relatively favoured in their trade as long as they were able to maintain their political independence. Bulgaria's as well as Yugoslavia's trade in 1940 was higher in dollar value than in 1939, and Roumania's exports approached very nearly the 1939 level, in spite of the decline during the last quarter due to territorial loss and the failure of crops. She profited from higher prices received for mineral oils, which came to represent 63% of the export value in 1940 as against 42% in 1939. The weight of the oil exported, however, declined for the fourth successive year. In 1940 it was 16% less than in 1939, and in the first quarter of 1941 25% less than in

<sup>1</sup> Cf. *Foreign Commerce Weekly* (U.S. Department of Commerce), December 14th, 1940.

the first quarter of 1940. Details of the oil exports in the years 1938-1940 are given below :

*Table 8.—Roumania: Exports of Petroleum, Gasoline, etc.*

Exports to	Metric tons (000's)			Lei (000,000's)		
	1938	1939	1940	1938	1939	1940
France.....	289	238	87	721	635	405
Czecho-Slovakia.....	295	437	217	645	1,207	1,436
Germany.....	705	849	1,148	1,723	2,590	9,116
Greece.....	200	75	188	400	210	1,148
Hungary.....	198	165	35	387	376	197
Italy.....	537	635	343	910	1,468	1,798
Switzerland.....	89	114	114	238	388	775
Turkey.....	54	30	148	116	90	961
United Kingdom.....	541	619	473	1,170	1,995	3,038
Other countries.....	1,569	1,016	776	3,005	2,270	4,130
Total.....	4,497	4,178	3,529	9,313	11,227	23,002

*Note.* Calculated at official exchange rates (one leu equalling 0.733 cents in 1938, 0.708 cents in 1939 and 0.498 cents in 1940) the dollar value of the above exports amounts to \$68 million in 1938, \$80 million in 1939 and \$115 million in 1940.



## CHAPTER IX

### TRANSPORT

In the majority of countries inland communications are responsible for most of the transport in domestic trade. In international trade, on the other hand, about three-fourths of the transport is normally carried by sea.<sup>1</sup> Only in Continental Europe is a large proportion of the goods entering into international trade carried by inland routes. The war has rendered that area far more dependent upon inland communications than usual. After the invasion by Germany of vast territories in northern and western Europe and Italy's entry into the war in the middle of 1940 the facilities of oversea transport to and from Continental Europe were largely eliminated. Elsewhere ocean shipping retained its predominant position. But almost everywhere the insufficiency of available transport facilities gave rise to problems which do not exist in peacetime.

#### OCEAN SHIPPING: GENERAL CONSIDERATIONS.

The world's merchant marine—excluding sailing vessels—rose from 43.1 million tons gross in 1913 to 68.5 million tons in 1939, or by 59%. Simultaneously, the transport services which the average unit of tonnage could perform increased: the average speed is estimated to have risen by about a fifth, loading and unloading facilities improved so that the average waiting period in ports was reduced, the proportion of oil-burning steam-ships and of motor-ships, which generally allow of greater cargo space for each ton gross, increased, as did the tonnage of specialized ships (for example, tankers) able to carry out economically the transport of certain commodities. The following figures show the world's motor-ships, oil-burning steam-ships and tankers in 1914 and 1938:

	Tons gross (000's)		Percentage of total world tonnage	
	1914	1938	1914	1938
Motor-ships (oil engines) . . . . .	194	14,930	0.4	22.3
Oil-burning steam-ships . . . . .	1,528	20,058	3.4	30.0
Tankers (included in the preceding two items) . . . . .	1,352	10,716	3.0	16.0

<sup>1</sup> In his book *Die Grossschiffahrtswege des Welthandels* the Danish economist Johannes Humlum estimates the weight of the goods entering into world international trade in 1937 at 371 million tons, of which 280 million, or 75%, were transported by sea.

Though the tonnage of sailing vessels declined from around four to one million tons gross from 1914 to 1939 and the tonnage of steam- and motor-ships constructed for passenger traffic increased, the freight-carrying capacity of the world's merchant marine has probably almost doubled since 1914.

The quantum of world trade,<sup>1</sup> however, increased between 1913 and 1938 by only about a fifth. The change in the relationship between cargo space and quantity of goods to be carried is due to a far-reaching modification of trading routes and the increased use of liner traffic at the expense of tramp shipping, implying a reduction in the degree to which existing cargo space is utilized. At the outbreak of the present war, therefore, there were much greater possibilities than in 1914 of saving cargo space by the reorganization of shipping.

The world's shipbuilding increased from the low figure of 0.5 million tons gross in the depression year 1933 to 3 million in 1938. Total shipbuilding during the six years from 1933 to 1938, inclusive, amounted to almost 9 million tons, but as the world's merchant marine rose by only 0.3 million tons, the new construction was almost offset by the tonnage of ships lost or broken up. Since the beginning of the war the breaking-up of old ships (other than damaged) has practically ceased, and the operation of over-aged ships has become profitable owing to the scarcity of shipping.

As is shown in Table 1, the world's merchant marine underwent a marked decentralization in its national distribution between 1913 and 1939. The share of the United Kingdom, the foremost shipping nation, fell from 42% to 26%, but the actual tonnage of her ships was only slightly reduced and that of the British Commonwealth of Nations as a whole increased. The increase in the merchant marine of the United States from 4.3 to 8.1 million tons is not indicative of recent peace-time trends; between 1922, when it reached 15.7 million tons gross, and 1939 that marine fell steadily in size. The bulk of the remaining increase in shipping tonnage between 1913 and 1939 is due to Japan and various minor countries, particularly in Europe (Norway, Netherlands, Greece, Sweden, etc.).

When the war began, German ocean-going ships sought refuge in domestic and neutral ports and Germany launched a submarine campaign against the Allied powers to cut them off from overseas supplies, while the United Kingdom and France introduced a sys-

<sup>1</sup> Variations in quantum represent changes in value after elimination of the effect of price changes; they are thus indicative of the quantitative movement.

Table 1

*Steam and Motor Merchant Vessels: Gross Tonnage.*

*Note:* The figures refer to the middle of each year. Ships of less than 100 tons are not included. The reported world gross tonnage of sailing vessels (likewise excluded) was 3,891,000 in 1913 and 930,000 in 1939; these figures, however, are incomplete, as data on sailing vessels are not available for certain countries (especially Japan, Turkey, Greece and the U.S.S.R.).

	Tons gross (000's)	
	1913	1939
United Kingdom.....	18,274	17,891
British Dominions, Colonies, etc.....	1,575 <sup>a</sup>	2,966
United States of America.....	4,303	8,135 <sup>b</sup>
Continental Europe <sup>c</sup>		
Norway.....	1,871	4,834
Germany.....	4,743	4,483
Italy.....	1,274	3,425
Netherlands.....	1,287	2,969
France.....	1,793	2,934
Greece.....	706	1,780
Sweden.....	944	1,577
Denmark.....	711	1,175
Other countries.....	2,382	3,507
	15,711	26,684
U.S.S.R.....	790 <sup>d</sup>	1,306
Japan.....	1,500	5,630
Latin America.....	793	2,018 <sup>e</sup>
Other parts of the world.....	133 <sup>a</sup>	653
World.....	43,079	65,283

<sup>a</sup> Incomplete figures.

<sup>b</sup> Excluding vessels on the Great Lakes (3,227 in 1939).

<sup>c</sup> The countries are put in the order of the magnitude of their tonnage in 1939.

<sup>d</sup> Russia (old frontier).

<sup>e</sup> Of which, Panama 718.

tem of contraband control which in practice amounted to a maritime blockade of the Reich. A counter-blockade was declared by Germany, whose campaign took the form of an unrestricted submarine and mining warfare. In retaliation the Allied powers ordered, in November 1939, the seizure of German exports on the high seas.

A considerable difference existed, however, and still exists, between the British and German blockades. The former has been effective in so far as it has rendered it practically impossible to effect transports by sea between continents other than Europe and Germany or countries occupied by her. The German blockade, on the other hand, has not prevented the continuance of shipping to and from the United Kingdom on an extensive scale, though the wholesale destruction of merchant vessels has created a scarcity of tonnage and reduced the

shipping facilities available to normal trading activities the world over. In peace conditions there is usually—except under boom conditions such as prevailed, for instance, in 1937—a reserve of idle tonnage, consisting largely of obsolete ships and fluctuating inversely with the quantum of international trade;<sup>1</sup> but during the war the idle tonnage has been restricted largely to ships immobilized on account of the risk of being seized or sunk if put into service.

Of vital importance to military as well as economic activities, shipping became with the outbreak of war the object of strict government control in the major shipping countries. The sale or chartering of ships to foreigners without special permission was generally prohibited; in certain countries sailings were made subject to licences, or the shipping of essential products given priority over that of others, or the government was given the right of requisitioning ships for national defence or to ascertain supplies; the insurance of ships and cargoes was regulated and freights controlled in certain cases.

Considerable savings of shipping space have been made by loading ships more heavily than in peacetime, by suppressing traffic on non-essential routes or in non-essential goods, and by accelerating the construction of new ships. Against these factors stand the losses to mercantile traffic due to the sinking of ships, the requisitioning of numerous ships for use as military transports or naval auxiliaries and the loss of time through the destruction or closing of certain ports and the congestion in others, through the use of convoys (which take time to assemble, and reduce the speed of the participating ships to that of the slowest) and through the lengthening of trading routes.

To judge the present situation it is necessary to consider in some detail the shipping conditions in two countries—the United Kingdom, which owing to its geographical position and its dependence upon foreign supplies is menaced by the difficulties of ocean transport, and the United States, whose reserves of shipping space and expanding shipbuilding industry are important elements in any endeavour to ease the situation.

#### SHIPPING PROBLEMS OF THE UNITED KINGDOM

During the 'twenties and 'thirties British shipping failed to develop in proportion to that of other countries, a fact which appears to be due largely to the decline in coal exports. The tonnage of ocean-going

<sup>1</sup> At the beginning of 1932, when the quantum of trade was at its lowest level, the tonnage of laid-up ships reached 14 million tons gross, or about a fifth of the existing world tonnage.

ships registered in the United Kingdom, as mentioned above, was less in 1939 than in 1913. The British share in the tonnage of ships launched had fallen from around two-thirds before the 1914-18 war to about one-third.

From the beginning of 1940 a scheme for assistance to British shipping came into effect. It provided for a subsidy of up to £2,750,000 per annum to deep-sea tramp shipping during five years and considerable credits for the building of new mercantile vessels. When the war broke out, the building and repair of ships were put under the control of the Admiralty, which organized the production of ships of the simplest suitable standard types for the most rapid delivery. Before the war the Government had decided to build up a wartime reserve of tonnage, but only four ships had been acquired for this purpose up to September. Soon after the outbreak of war questions concerning shipping were taken out of the hands of the Board of Trade and put under the control of the newly formed Ministry of Shipping. As the British mercantile fleet proved inadequate for war needs, a number of neutral (mostly Greek) ships were chartered for British account. A licensing system for voyages was introduced but was replaced early in 1940 by requisitioning which gave the Government much more direct and far-reaching control of shipping activities. The ships remained, however, under private ownership and management. The owners were, from the outset of war, requested to limit the rise in freight rates, and the government fixed freights in the principal tramp markets at rates which from the beginning of November 1939 had to be raised by 30%. This and later increases were allowed chiefly in order to offset the rise in the cost of operating ships but did not include provision for offsetting losses or for building up reserves (apart from normal allowances for depreciation). They fell short, therefore, of the increase in the market rates for freights charged by neutral ships.

The Government control extended also to the insurance of ships and cargoes. A war risk insurance scheme with Government participation had been put into operation by British underwriters in the spring of 1939. On the outbreak of war a War Risk Insurance Office was established by the Government. The market continued, however, to provide insurance, particularly against war risks for ships and cargoes not covered by the Government's scheme, such as neutral foreign vessels or trade not touching the United Kingdom.

Directly and indirectly, the United Kingdom was the country most affected by the sinking of ships through enemy action. According

to British reports the losses of British, Allied and neutral shipping through such action from the beginning of the war up to the end of June 1941 was as follows:

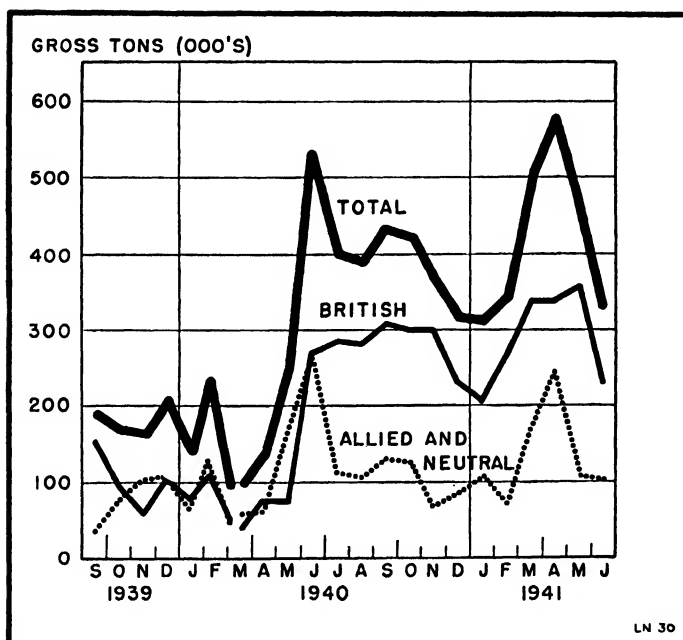
Ships	Number of ships	Tons gross (000's)
British.....	1,078	4,605
Allied.....	334	1,498
Neutral.....	326	1,015
Total.....	1,738	7,118

These figures are not quite complete, partly because of the difficulty of keeping the records for the last months up to date, partly because they do not include the losses of merchant vessels commissioned for naval service. Moreover, the data exclude ships damaged but not sunk. Naturally, damaged ships after repair again become active; but at any given moment there is in British shipyards a considerable tonnage of ships under repair.

Up to the spring of 1940, the sinking of British, Allied and neutral ships averaged well under 200,000 tons gross monthly (Diagram). Though this rate was roughly twice as high as that of the sinkings during the first two years of the 1914-18 war, it was hardly alarming. The losses are likely to have been roughly offset by new ships launched outside Germany; moreover, the Allied powers during this period seized about 300,000 tons gross of the German mercantile marine. It was not until the spring and early summer of 1940 when Germany occupied the greater part of the Atlantic coast of Continental Europe that the sinkings assumed a menacing character. Total shipping losses roughly doubled, and those of British shipping increased four or five times. The losses of Allied and neutral shipping had previously been of the same magnitude as those of the British, but from the middle of 1940 they represented from one-third to a half the British losses. Total sinkings showed a seasonal decline around the year end 1940 but resumed on an increased scale of around half a million tons a month in the spring of 1941—a rate, however, which appears not to have been maintained during the summer.<sup>1</sup> During the 1914-18 war the losses reached their highest level from February to August 1917 inclusive, amounting on an average to 630,000 tons gross.

<sup>1</sup> The loss in June 1941 (the last month for which figures have been made available) is recorded at 329,000 tons; that in July is declared to have been the lowest in more than a year.

*British, Allied and Neutral Shipping Losses through War Action.*



*Note.* The diagram is based upon British figures—monthly from March 1940 and referring to periods of four weeks before that date—representing merchant vessels not commissioned for naval service. The revised figure for the aggregate loss during the whole period is slightly in excess of the total of those summarized in the diagram.

Simultaneously with the increase in sinkings from the middle of 1940 the possibilities of replacement through new construction became much reduced. New ships launched in Continental Europe—which accounted for two-fifths of the world's shipbuilding before the war—could no longer mitigate the scarcity of freight space in ocean shipping.

The full impact of the increase in shipping losses was not felt, however, during 1940. This is due chiefly to the fact that ships which had previously served the trade of neutral countries in north-western Europe became available for British and non-European transport.

For example, the great majority of the mercantile vessels of Norway and Netherlands, after the invasion of these countries, were administered by committees established by the shipowners with

headquarters in London and operated in collaboration with the British Ministry of Shipping. Of the Norwegian mercantile marine of 4.8 million tons gross, over four-fifths were outside domestic waters at the time of invasion, and one year later (in the spring of 1941) the number of Norwegian vessels controlled from London numbered about 900, of 3.6 million tons gross. It is true that the Norwegian mercantile marine had even before the invasion of Norway been engaged chiefly in shipping between foreign ports, but the fact that it became available for British trade was of considerable advantage to the United Kingdom, as the Norwegian marine is very modern and includes a high proportion of tankers.<sup>1</sup> A portion of the Norwegian fleet has, however, continued operations in safe trade between neutral ports. Of the Dutch merchant marine of not far from 3 million tons gross about 2 million tons escaped German control and are engaged largely in Pacific trade of the Netherlands Indies. Danish vessels which were not in domestic waters or in the Baltic when Denmark was invaded were either seized by the United Kingdom or held in neutral ports.<sup>2</sup> The Danish, Belgian, French and Polish vessels under British control at the end of 1940 have been estimated together at 1.3 million tons gross.

After the German invasion of Norway and Denmark 40% of the Swedish mercantile marine remained outside the Skagerrak blockade, cut off from the home country. The ships in question have become engaged in traffic between neutral ports, particularly in the Pacific.<sup>3</sup>

With the extension of the war to the Balkans in the spring of 1941 the British supply of tonnage was again increased by the bulk of the Greek mercantile marine and a number of Yugoslav ships. A portion of the Greek marine, which consists chiefly of tramps, had been chartered for British account before that time.

The sinking and damaging of ships around the British Islands was not the only menace to the oversea communications of the United Kingdom. Owing to the exposed position of the southern and eastern coasts of Great Britain the ports of these coasts could

<sup>1</sup> At the end of June 1939 Norwegian tankers amounted to over 2.1 million tons gross, or 18½% of the world's tanker fleet and 44% of Norway's total mercantile marine. The tankers of the United Kingdom measured 2.9 million tons gross.

<sup>2</sup> The Danish fleet was considered as belligerent by the United Kingdom and was thus not allowed to continue traffic between neutral ports.

<sup>3</sup> It is interesting to note that when early in 1941 Sweden by arrangement with Germany and the United Kingdom could resume her oversea shipping on a small scale she had to send out as many ships as she brought home; the proportion of the ships inside and outside the blockade was thus not to be affected.



no longer be freely used for oversea shipping. Normally, the eastern and southern coasts of Great Britain absorb about 40% and 22-23% respectively of the total shipping of the United Kingdom, the western coast around 30% and ports in northern Ireland and elsewhere the remainder (5-10%). The concentration of the foreign traffic in the western ports has created two additional problems—that of avoiding heavy congestion in these ports, and that of carrying by rail the goods entering through these ports to the consuming centres, particularly London. The fact that both these problems have been solved must be regarded as one of the major achievements in the war economy of the United Kingdom. Recognition of the fact that the entire transport system of that country must be regarded as a unit led to the amalgamation of the Ministry of Shipping and the Ministry of Transport in May 1941.

A considerable lengthening of the trading routes occurred when pulp, wood and animal foodstuffs, which used to be bought from Northern Europe, had to be fetched from other continents, and when the Mediterranean became unutilizable as a trading route to the East. To a certain extent the loss of shipping space on this account has been offset by gains due to the discontinuation of coal exports to countries such as Italy and France.

The ships sunk engaged in trade with the British Isles had to be replaced largely by withdrawals of British or British-controlled vessels operating in other parts of the world, particularly in the Far East or in inter-American trade. A portion of these withdrawals could be replaced in their turn by United States tonnage that had been laid up or withdrawn from European trade; but owing to the increase in United States imports from non-European areas this source of supply soon became insufficient. New signs of strain on shipping occurred as early as the autumn of 1940; thus, bananas bought in Jamaica by the United Kingdom had to be destroyed as there were no vessels available for their transport to that country. By the winter of 1940-41 there had developed an acute shortage of ships in non-European traffic. By a series of measures which will be described in some detail further on, new American reserves of mercantile tonnage were mobilized in the spring of 1941.

Figures for the new mercantile tonnage built by British shipyards during the war have not been published. Many of these yards are naturally occupied with the repair of ships or with the building of naval units. During 1938 merchant vessels measuring 1,030,000 million tons gross were built in the United Kingdom and Ireland,

but the figure for the first half of 1939 (295,000 tons) was a third below that for the corresponding period of 1938. When the war broke out, however, the Government placed orders for a large number of merchant vessels and production again increased. In a statement to Parliament early in 1940 the Civil Lord of the Admiralty expressed the hope that during the twelve-month period beginning February 1st, 1940, British yards would attain a production greater than the maximum during the war of 1914-18, namely 1,338,000 tons gross in 1918. During the period from February 1st, 1941 to January 31st, 1942, the Admiralty would, according to the statement, aim at a program at least as great as that of the previous twelve months.

It may be interesting to add some information on shipbuilding in the British dominions. Canada's shipbuilding industry was negligible before the war—the production of merchant vessels in 1938 amounting to 11,000 tons gross and in the first half of 1939 to 1,000 tons—but has since developed at an extremely rapid rate. The number of workers engaged in that industry was only 4,000 in the spring of 1940 but had risen to 20,000 one year later and it is estimated that the construction on hand or in prospect will call for the employment of between 40,000 and 50,000 men by 1943. The bulk of the industry has been engaged in naval construction, but in April 1941 a program for constructing 96 merchant vessels of 10,000 tons each was announced and in May the Press reported the placing of orders for the construction in British Columbia yards alone of 100 steel cargo ships at a total cost of \$(Can.) 175 million. Other British Dominions, which produced 19,000 tons gross of merchant vessels in 1938 and 17,000 tons in the first half of 1939, are also believed to have increased their production of new ships, though at a lower rate than Canada, and have performed an important task in relieving the mother country from a portion of the work involved in the repair of damaged ships.

#### UNITED STATES SHIPPING POLICY

The United States' ocean-going merchant fleet declined steadily from 1922 to the end of the 'thirties. A large proportion of the fleet dates back to the 1914-18 war or the years immediately following: by the middle of 1939 49% of the tonnage exceeded 20 years of age and 35% was between 15 and 20 years old. A modest replacement program had been adopted, however, in 1938. Over a fifth of the fleet<sup>1</sup> was laid up but a high proportion of the idle ships was so

<sup>1</sup> For more exact information see Table 2.

maintained as to be available in the event of emergency. Over half the tonnage, disregarding the vessels on the Great Lakes, was engaged in domestic traffic, intercoastal and other. The ships engaged in foreign traffic represented about a quarter of the tonnage and carried only a minor portion of the goods entering into United States external trade.<sup>1</sup>

The outbreak of war in 1939 gave rise to numerous new problems. In the autumn of 1939 the United States Congress adopted the "Neutrality Act" which from November 4th barred American ships, as well as American citizens, from journeys within certain defined combat areas.<sup>2</sup> Much profitable shipping was thus lost to American lines;<sup>3</sup> but after a period of adjustment most of the affected ships found occupation on new routes. As Table 2 shows, the tonnage of American vessels engaged in trade with Africa, Asia and Oceania between the second quarter of 1939 and the last quarter of 1940 almost tripled.

With the United States armament programme calling for a steady increase in foreign supplies and the gradual withdrawal from American routes of European ships which became engaged in traffic with the United Kingdom, the temporary abundance of American shipping space soon turned into a shortage. Particularly in traffic with distant markets the scarcity of tonnage was being felt late in 1940. Simultaneously the community of United States and British political interests became a predominating factor in American shipping, which accordingly was faced with a much wider problem than that of securing supplies for the domestic market.

<sup>1</sup> The proportion of the total external commerce of the United States carried in domestic vessels dropped steadily from 51% in 1931 to 41% in 1927, 35% in 1932 and 23% in 1939. In 1940 this trend was reversed.

<sup>2</sup> The combat areas as first established covered the waters surrounding the British Islands, including the Atlantic coast of France, and the North Sea with the coasts of Belgium, Netherlands, Denmark, Sweden and Norway as far north as Bergen, as well as the Baltic Sea. On April 10th, 1940, the European waters north of Bergen were included. On June 11th the Mediterranean and the Atlantic approach thereto (including the Atlantic coast of French Morocco and the southern Atlantic coast of the Iberian Peninsula) and the entrance to the Gulf of Aden were also closed. (On April 11th, 1941, however, the Red Sea was again opened to American ships.) Further, American vessels are forbidden to trade with Atlantic ports of Canada and Newfoundland.

<sup>3</sup> According to the Quarterly Report of the U.S. Maritime Commission, dated September 30th, 1939, the number of American ships, exclusive of tankers, engaged in trade with the United Kingdom, Atlantic and Baltic Europe, was 92, of 592,000 tons gross.

Table 2

*Employment of United States Steam and Motor Merchant Vessels of over 1,000 gross tons (excluding lake and river tonnage).*

Employment	Tons gross (000's)		
	2nd quarter 1939	4th quarter 1940	Change
Laid up: government ownership.....	770	371	- 399
private ownership.....	965	350	- 615
Coastwise: intercoastal.....	1,022	745	- 277
other.....	3,276	3,326	+ 50
Europe.....	705	60	- 645
Canada, Central America.....	533	632	+ 99
South America.....	320	485	+ 165
Africa, Asia, Oceania.....	359	1,073	+ 714
Around world, etc.....	178	185	+ 7
Government service.....	7	52	+ 45
Total.....	8,135	7,279	- 856

The situation was met by a series of government measures. Thus, a system of shipping priorities was introduced, a portion of the Atlantic was patrolled by the United States navy, numerous ships engaged in American domestic traffic were diverted to more essential routes, foreign ships lying idle in American ports were seized, and shipbuilding in the United States was speeded up. It may be of interest to describe these measures in greater detail.

The direct government control of American shipping was long exercised chiefly through the voluntary cooperation of shipowners with the Maritime Commission. It included a system of priorities for the shipping of a few essential import products, introduced early in 1941. For various reasons, this system proved inadequate. Legislation giving the Maritime Commission authority to exercise a statutory system of priorities with regard to shipping routes and voyages as well as the cargo to be carried entered into force in July 1941.

The American neutrality patrol, which gives open warning when submarines are sighted, has been operating in the Atlantic since the beginning of May 1941, covering waters approximately 2,300 miles east of New York. The patrol serves chiefly as a measure of protection for British-controlled ships carrying American goods to ports of the United Kingdom.

The re-allocation of American merchant shipping serves at once the needs of national defence and aid to the United Kingdom. The gross tonnage of vessels transferred from coastwise to foreign runs aggregated 340,000 tons at the end of March 1941, but at that time only part of the program had been carried out. Though a considerable portion of the ships in United States intercoastal trade (operating through the Panama Canal) had already been released for more essential routes, it was planned in the spring of 1941 to reduce the remaining traffic by half. Ships engaged in ordinary coastwise traffic were also reallocated, particularly tankers employed for the transport of oil from American ports of the Gulf of Mexico to the Northern Atlantic states. By the middle of May a fourth of some 250 tankers on this route had been diverted elsewhere or taken over by the government. A considerable portion of these ships were being engaged in bringing oil from Caribbean to North Atlantic ports for bunkering British vessels or for transshipment to the United Kingdom. As further withdrawals were anticipated<sup>1</sup> and the oil consumption in the Atlantic states was increasing, a shortage of oil in these states was expected to occur by the autumn of 1941. Several measures were taken, however, in order to overcome the difficulties: the transport of oil by canal from the Great Lakes to New York was increased, the capacity of existing pipe lines for the transport of oil from the south was increased, and new pipe lines were being constructed.

Another factor of importance has been the seizure of foreign ships laid up in the United States ports. The number and tonnage of such ships early in 1941 were as follows:

	Number	Tons gross (000's)
Danish.....	35	117
Italian.....	26	140
French.....	12	147
Belgian.....	4	29
German.....	2	9
Greek.....	2	7
Norwegian.....	2	15
Other <sup>a</sup> .....	4	9
Total.....	87	474

<sup>a</sup> These comprise one Estonian, one Lithuanian, one Roumanian and one Yugoslav ship.

<sup>1</sup> In July 1941 the owners were asked by the United States Government to release 100 more tankers.

The Danish, Italian and German ships were taken into protective custody early in April 1941 and later both these ships and those of other nationality were taken over by the United States Government for use at sea.

These seizures inspired other American countries to take similar measures. The foreign ships laid up in Latin American ports in the spring of 1941 numbered 148, of which 50 (of 278,000 tons gross) were German, 61 (375,000 tons gross) Italian, 18 (57,000 tons gross) Danish, 16 French and 3 of other nationality. Most of these appear to have been taken over by Latin American authorities.

The ships seized by the United States formed part of a "pool" of two million tons of shipping which at the request of President Roosevelt was assembled for the purpose of national defence and aid to Britain. Other sources of tonnage for this pool were ships diverted from domestic traffic and the remainder of the laid-up ships of the United States Maritime Commission. It will be recalled that, at the outbreak of war, 1.7 million tons gross of United States ships were idle, of which amount 0.8 million tons were government-owned. Owing chiefly to sales abroad the total was reduced to 0.7 million tons at the end of 1940. By the early summer of 1941 practically all the ships had been put into service.

The replacement programme adopted by the United States Maritime Commission in 1938 provided for the construction of 50 ships annually during ten years. The number of ships built in the United States was only 28 in 1939; but in 1940 the number had risen to 53, of 447,000 tons gross. During the same year 190 ships, totalling 1.7 million tons, of considerable average age, were sold abroad, chiefly to the United Kingdom. Up to the end of 1940, therefore, the tonnage of the United States merchant marine declined. By that time, however, the country had engaged itself in the production of new ships on a large scale. American shipyards were being fully utilized as early as the end of 1939; consequently old yards which had been idle since the shipping boom of the World War were reconditioned and new yards established.

This activity was mainly on Government account. The Maritime Commission's replacement programme was accelerated at the outbreak of the war and, by early in June 1941, 283 ships had been ordered and 86 launched of the 500 originally intended for construction over a ten-year period. In addition, the President authorized, in January 1941, the construction under an emergency programme of

200 cargo ships of standardized design, so-called "ugly ducklings" of 7,500 tons gross. In April it was decided to build 212 ships (100 similar to those of the regular Maritime Commission programme, and 112 of the "emergency" type) for transfer to the United Kingdom under the terms of the Lend-Lease Act. Another 60 special vessels of the "emergency" type had been ordered by the British Government and were under construction, and 86 seagoing vessels of various types had been ordered for private account. The building of these ships, which together amount to between nine and ten million deadweight tons,<sup>1</sup> is planned for completion before the end of 1943; the accelerated pace at which deliveries are to be made is shown by the following official estimates:

1941.....	1,250,000 deadweight tons
1942.....	3,500,000 " "
1943.....	5,000,000 " "

The expected quarterly deliveries of ships under programmes existing as of March 25th, 1941 were:<sup>2</sup>

Year and quarter	Tons gross (000's)				
	Regular Maritime Commission Program	For Private Account	American Emergency Program	Emergency Program for British	Total
1941: 1st.....	96	53	—	—	149
2nd.....	148	78	—	—	226
3rd.....	154	72	—	—	226
4th.....	157	45	7.5	90	299
Total ..	555	248	7.5	90	900
1942: 1st.....	114	75	330	90	609
2nd.....	125	52	270	90	537
3rd.....	60	47	300	90	497
4th.....	70	92	315	90	567
Total ..	369	266	1,215	360	2,210

<sup>1</sup> Deadweight tonnage is the weight in long tons of cargo, passengers, fuel and stores which can be carried by a vessel when fully loaded (thus, the difference between the weight of a vessel when unloaded and fully loaded). The figure for the deadweight tonnage of average-sized ships exceeds that of the gross (capacity) tonnage by about 50%.

<sup>2</sup> Source: *Survey of Current Business*, April 1941.

By the middle of 1941 the construction was announced to be ahead of schedule and the future deliveries were expected to be substantially increased.<sup>1</sup>

The effort involved in the expansion in merchant shipbuilding is so much the more remarkable as simultaneously numerous yards are occupied by the unprecedented programme of naval construction.<sup>2</sup>

#### MOVEMENT OF SHIPPING FREIGHT AND INSURANCE RATES.

The increases in freight rates have naturally varied according to the war risks involved on different routes, and Government controls and other factors have led to discrepancies in rates charged by ships of different nationality. Attention may be drawn, however, to a few broad tendencies reflecting the events described above. From the outbreak of war up to March 1940 freight rates rose rapidly as is shown by the following indices for March 1941 (Aug. 1939 = 100):

Lloyd's List (78 world routes) . . . . .	494	Denmark (28 world routes) . . . . .	488
Netherlands (General index) . . . . .	653 <sup>a</sup>	Sweden (Svenska Handelsbanken) . . . .	662

<sup>a</sup> February 1940.

Similar information for the subsequent period is not available, but study of rates charged on particular routes indicates that in spite of the increased sinkings of ships the rise came to an end during the second quarter of 1940 and that on many routes there was even a considerable decline—an effect no doubt of the curtailment of shipping to the invaded countries of Continental Europe and the transfer of the bulk of the mercantile marines of these countries for use in the trade of other countries. From the middle of 1940, however, the gradual withdrawal of ships controlled by the United Kingdom for service in British traffic under rates fixed by the Government encroached upon the shipping space available to the market, and a new increase set in, bringing market rates at the end of the year near to the previous maximum level of March. In the early months of 1941 the increase continued at an accelerated pace. Thus, time charter rates, which had risen from \$1.25-1.85 per ton and month in July 1939 to \$3.75-5.00 in December 1940, increased further to \$9-11 in April 1941. During

<sup>1</sup> Since the above was written the President has requested an appropriation of \$1,250 million to enable the Maritime Commission to build 566 additional cargo ships of 3.8 million tons gross (5.5 million tons deadweight) for delivery before the end of 1943.

<sup>2</sup> In April 1941, 466 ocean-going naval vessels of more than 2.5 million tons with a total cost of about \$7,000 million were under contract, as well as 312 patrol craft, tugs and the like, 166 harbour and district craft and 1,404 small boats.



the 1914-18 war, similar charter rates rose to more than \$13.50 a ton.<sup>1</sup>

War risk premia for ships and cargoes have followed an orbit differing from those of freight rates. The cost of war risk insurance for vessels in British traffic, which is borne by the British Government when the vessels are requisitioned, rose from 2% for 91 days (or 8% per annum) at the outbreak of war to 7% for 91 days (28% per annum) in the spring of 1941. War risk premia for cargoes rose with the increased sinkings of ships during the second quarter of 1940 while freight rates declined. Premia for cargoes sent from the United States to the United Kingdom are reported to have increased from 3½% in May 1940 to 7% in July and 10% in August. On this and other exposed routes premia up to 16% have been recorded, though average rates have been lower. On routes between the United States and continents other than Europe rates during the latter part of 1940 varied between ¾% and 2% if the goods were carried on American ships and otherwise between 2% and 5%. The premia quoted cannot, of course, be taken as representative of the relative losses of cargoes through war action.

#### THE SHIPPING SITUATION SUMMARIZED.

The history of ocean shipping during the war is one of increased strain, temporarily relieved on two occasions—first in the spring of 1940 by the events which led to the elimination of the demand for shipping from several countries of Continental Europe, whose supply of shipping space was put largely at the disposal of the United Kingdom, and secondly in the spring of 1941 when various shipping resources of the United States were mobilized or diverted from domestic routes through Government action. Shipbuilding in North America has been gradually stepped up during the whole period of war. At the time of writing, in the middle of 1941, available reserves of shipping space outside Continental Europe appear to approach exhaustion; more and more, therefore, the shipping situation appears to be determined by the race between new construction and the destruction of ships through war action. Shipbuilding activities, particularly in the United States and Canada, are increasing rapidly, while, according to the latest information, the rate of sinkings has declined very considerably.

<sup>1</sup> *Federal Reserve Bulletin*, May 1941, page 394.

### TRANSPORT IN CONTINENTAL EUROPE.

The sea-going traffic of Continental Europe has declined to a fraction of its previous size and motor traffic by road for civil use has been drastically restricted owing to the scanty supply of motor fuel. Part of the traffic previously carried by sea and road has been diverted to railways and inland water routes. Railways have had, in addition, to transport troops, military equipment and populations evacuated from menaced areas. But certain peace-time activities affecting the transport system, such as tourist traffic, have been reduced.

As the transportation problem has been most acute in Germany it may be useful to consider that country first.

Germany's chief source of foodstuffs and raw materials, after her overseas traffic had been cut off, was south-eastern Europe. Her trade with that region had been chiefly by rail and the Danube; but certain commodities—such as Roumanian oil and Yugoslav bauxite—had been carried by sea. Similarly, coal exports from Germany to south-eastern Europe—as well as to Italy—had in peace-time gone chiefly by sea. When the sea route was no longer available, goods had to be diverted to the internal means of communication which were inadequate. There are about 3,500 barges on the Danube, able to transport annually some 7 million metric tons of goods, which is less than half the weight of the normal aggregate exports of Bulgaria, Hungary, Roumania and Yugoslavia. About a tenth of the tonnage of the barges is represented by tankers; but if all the tankers were used in traffic between Roumania and Germany they would be able to carry only about  $1\frac{1}{2}$  million metric tons of mineral oil annually, or a third of Roumania's total oil exports in recent years.<sup>1</sup> Yet the merchandise traffic on the Danube is of far greater importance than that by rail.<sup>2</sup>

During the early months of the war Germany organized transport by German-controlled boats on the upper Danube while on the lower part of the river she attempted to charter bigger barges which cannot pass the Iron Gates. The United Kingdom and France competed with her, however, and charter rates rose to five times the pre-war level. The river traffic increased rapidly during the last quarter of 1939; but owing to severe frost it fell during the subsequent quarter to a fraction of the corresponding figure for 1939.

<sup>1</sup> Cf. page 242.

<sup>2</sup> The transport of 7 million tons a year by rail would require 30 trains daily of 40 trucks carrying 15 tons each.

*Freight Carried on the Danube in the Section "Iron Gates-Cataracts."*

	Metric tons (000's)			
	4th quarter		1st quarter	
	1938	1939	1939	1940
Upstream.....	329	673	227	56
Downstream.....	109	265	93	17

During 1940 and the early part of 1941, the supervision of the Danube traffic underwent considerable changes. The International Danube Commission was considered dissolved in the autumn of 1940. A new commission was founded, including representatives of Bulgaria, Germany, Hungary, Italy, Roumania, Slovakia, the U.S. S.R. and Yugoslavia, and the riparian countries took measures to supervise the traffic until, ultimately, the effective control fell into German hands.

The system of inland waterways in Germany has been considerably extended in recent years. A few months before the outbreak of war in Europe the Mittelland Kanal between the Rhine and the Weser had been completed. In December 1939 a canal was opened between Gleiwitz in Upper Silesia and the Oder, shortening the transport of coal from Silesian mines to Stettin and the interior of Germany; and early in 1940 work was started on an adjoining canal which would complete the connection of the Oder with the Danube.

On the other hand, traffic on certain German waterways was adversely affected by the war. The Rhine between Karlsruhe and Basle was closed at the beginning of the hostilities and was not reopened until March 10th, 1941. Traffic on the lower Rhine has naturally been reduced on account of the discontinuation of oversea shipping from Dutch ports.

Besides keeping the Danube frozen longer than usual, the severe winter of 1939-40 paralysed the traffic on Germany's inland waterways. Coal transports became insufficient to meet the requirements for heating purposes. The railways proved inadequate to take care of the goods which could not be forwarded by water. As was mentioned elsewhere,<sup>1</sup> the German railways had been somewhat neglected during the few years before the war and it was only in March 1939 that a four-year programme was initiated to increase the supply of rolling stock. This measure came too late to prevent a heavy strain on the railways during the early part of the war, more particularly during the first quarter of 1940. Railway traffic had to be restricted and there were signs of a severe deficiency in railway material. Numerous Belgian and Italian railway trucks in traffic were retained in Germany, which also requested Belgium, Hungary, Roumania

<sup>1</sup> Chapter I.

and Yugoslavia to loan trucks. Roumania experienced difficulties about the return of 2,800 tank cars which she had put at Germany's disposal. Orders for new railway trucks were placed by Germany in Belgium; and Sweden had to lend 500 trucks to Germany to secure the transport of coal from German mines to Baltic ports for shipment to Sweden. Later a similar arrangement was made for the loan of trucks by Switzerland to Germany.

In the spring of 1940 Germany's trade with Italy brought fresh pressure upon her railway system. Italian vessels had been allowed to carry German coal from Rotterdam to Italy for some time after the decision by the Allied powers to seize German export goods on the high seas. In March 1940, however, this traffic was stopped. As, simultaneously, Italy's coal purchases in the United Kingdom were discontinued, her entire coal import, amounting to one million tons monthly, had to be carried by rail from Germany.

From the latter part of 1940 Germany could shift part of the strain on her railway communications over to the countries she had invaded. France in particular appears to have had to contribute largely to the rolling stock employed in Germany. The use of inland waterways in the occupied countries for German account was limited, however, owing to the destruction of canals and barges at the time of the invasion and to the collection by Germany in the autumn of 1940, of barges at Atlantic ports for military purposes.

The transport to Germany from or through the U.S.S.R. had also presented considerable difficulties. Reconditioning and repair of the Polish railways was a more time-consuming process than that of their destruction, and transport through Poland was hampered by the fact that a large portion of the Polish rolling stock had fallen into Russian hands. The railways system of the U.S.S.R., besides being less developed than that of Central Europe and of a wider gauge, had been adapted to serve domestic transport rather than foreign trade. German trade agreements with the U.S.S.R., providing for large imports of primary goods in exchange for German manufactured products, are known not to have yielded the expected results—a fact for which transport difficulties were no doubt largely responsible. Yet the U.S.S.R. played a certain rôle as a transit country for transport between Germany and other countries. The railway Cernauti-Lwow, reopened for traffic sometime after the war in Poland, served German trade with Roumania (through Eastern Galicia), but the agreement regulating this traffic provided for only five trains daily, a quarter of the pre-war traffic. Of greater importance was the Trans-Siberian railway by which Germany maintained trading connections with the Far East and, to a limited extent,

with the Western Hemisphere. According to press reports, German arrangements with the U.S.S.R. provided for the transport through Siberia of 2,000 tons of goods per day in 1941. The weight of the goods actually carried was less, but Germany obtained considerable quantities of such import goods as soya beans,<sup>1</sup> fatty oils, cotton and foodstuffs, chiefly from Manchuria and occupied China, in exchange for chemicals and instruments sold particularly to Japan. Though the traffic suffered from the scarcity of railway trucks, long delays, damage to goods carried, and high charges,<sup>2</sup> its discontinuance from the time of the German attack upon the U.S.S.R. in June 1941 implied a severe restriction of Germany's trading connections.

France's chief transport difficulties date from the time of her military collapse. Not only was the railway traffic between occupied and unoccupied France severely restricted, but the transfer of a large portion of French rolling stock to Germany caused a reduction in railway transport generally. France's overseas shipping was largely discontinued, the supply of petrol required for transport by road was drastically reduced, and 3,000 of the 12,500 barges on French inland waterways were lost.

After her entry into the war in June 1940, Italy was faced with serious transport difficulties. She was cut off from overseas countries outside the Mediterranean and from her East African territories; and for the functioning of her railway system she became dependent upon the supply of coal by rail from Germany.

All the smaller countries in Northern and Western Europe, largely dependent on overseas trade, suffered from heavy shipping losses. The Netherlands lost the bulk of the transit traffic which plays an important rôle in her economy. With the reduction in shipping, countries bordering Germany became largely dependent upon her for their communications with the rest of Europe. Several of those invaded by Germany suffered great losses of transport equipment during the hostilities and later had to subordinate their communications to Germany's military and commercial interests. Swedish coastal traffic during the early part of the war was disturbed by German mine fields in The Sound and many goods usually forwarded by sea had to be sent by rail. Swedish oversea communications over Gothenburg were cut in April 1940 and could only be resumed on

<sup>1</sup> By June 1941 Germany is said to have received about 75,000 tons of Manchuria's preceding soya bean crop.

<sup>2</sup> In the autumn of 1940, the U.S.S.R. raised the valuation of Russian currency against the Reichsmark and early in 1940 she doubled or trebled the basic freight rates for most commodities of importance in Germany's Trans-Siberian trade. (*The Economist*, May 3rd, 1941.)

a very limited scale in 1941.<sup>1</sup> Finland in 1940 had to cede to the U.S.S.R. two of her chief ports—Viborg and Hangoe, the latter the only one of Finland's Baltic ports over which traffic had been possible the year round. Swiss communications suffered by the closing of the traffic on the upper Rhine until March 1941, and by the damage done to French railways in 1940. Switzerland has secured, however, an irregular supply of indispensable overseas products, forwarded in agreement with the belligerents on ships (chartered or owned by Switzerland) to Italian, French or Portuguese ports and thence by rail to Switzerland.

<sup>1</sup> Cf. page 210.

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## CHAPTER X

### THE SITUATION IN THE SUMMER OF 1941

A volume such as the present cannot attempt to deal with the whole kaleidoscopic scene of the war. The picture given in the preceding chapters necessarily omits much that will prove of importance in retrospect. This is especially true of events that were taking place as the book was being written. The chapter on consumption, for instance, makes no reference to conditions in south-eastern Europe, which were undergoing violent changes in the spring of 1941, or to the very serious food shortage which has developed in Greece, a country which in peacetime imported 30 to 50% of its consumption of wheat.<sup>1</sup>

But the most fateful event that occurred during the writing of this *Survey* was the German attack on Russia which began on June 22nd, and which opened a new and momentous phase of the war. The economic consequences of this event are at present incalculable. But certain facts are evident. Germany's foreign trade has been further restricted. The whole ambitious system of economic planning and commercial exchange between the Reich and the Soviet Union, laid down in the economic agreements of February 1940 and January 1941, and much advertised by Germany as a solution of her food and raw-material problem, has collapsed. The extent to which Russo-German trade had recovered under this system cannot be precisely ascertained. The German Minister of Economic Affairs declared in the spring of 1941 that it had increased ten times; but he did not state that the objective of the agreement, which was to bring the volume of trade back to the level of 1930/31, had been achieved. Germany's imports from the U.S.S.R. amounted to 436 million marks in 1930, falling off to 47 million in 1938 and 11 million in the first half of 1939. Even if one assumes that they subsequently recovered to a level of 300 million marks a year, that was not sufficient to

<sup>1</sup> It is reported that under the Italian occupation the Greek bread ration for civilians in June 1941 represented about one-tenth of pre-war consumption; and even this was so poor in quality, tasting of saw-dust, that digestive ailments were frequent. Greece's own wheat-growing region in the north-eastern part of the country was annexed to Bulgaria. The food shortage in Greece, verging on starvation, is due partly to the destruction of transport facilities—roads, bridges, railways, ships, fishing boats—in the course of the hostilities in April and May 1941. Cf. *Neue Zürcher Zeitung*, July 4th, 1941.

compensate for more than a fraction of the loss of overseas sources of supply due to the blockade.<sup>1</sup> But the fact that Germany was cut off from the overseas sources rendered the Russian supplies all the more important to her, especially as her trade with south-eastern Europe came to be disorganized by large-scale troop movements, mobilization, internal unrest in Roumania and elsewhere, the war in Yugoslavia and Greece, the partition of Yugoslavia, etc. Moreover, Germany undoubtedly had derived some advantage from being able to import goods through Russia from other parts of the world.

After the collapse of France, Russia concluded a number of trade agreements not only with Sweden and Switzerland but also with countries controlled or occupied by Germany, such as Belgium, Denmark, Norway, Hungary and Roumania, providing for the supply of Russian raw materials to these countries and thus benefiting to some extent the German war economy.

Imports from Russia into Germany and German-controlled Europe ceased with the invasion, and a leak in the British blockade was closed. Even more important, perhaps, were the indirect effects of the invasion of Russia on the German war economy. Large numbers of men had to be called up to increase the armed forces, and the labour scarcity in German industry became more acute. As observed in the preceding chapter, transport was from the outset a serious weakness in the German war economy. The war with Russia placed a further strain on the transport system; and the transport shortage reacted adversely on Germany's trade with the remaining countries with which she could trade. Coal deliveries to Sweden, for instance, were immediately affected.

Lastly, as far as can be judged from the first ten weeks of the campaign, the economic gain of military expansion was affected on this occasion both by the nature of the fighting and by the Russian "scorched earth" policy, the object of which has been to evacuate or destroy all that might be of value to the invader.

The situation in the Far East took a new turn in July 1941 as the Japanese war on China entered its fifth year. Japanese forces occupied French Indo-China in the latter part of the month. The United Kingdom, India and other members of the British Commonwealth thereupon denounced their trade agreements with Japan, as the United States had done in 1939. But of greater immediate importance was the freezing order which the Governments of the United States, the British Commonwealth and the Netherlands imposed on all Japanese assets within their frontiers and their colonies (including,

<sup>1</sup> German imports from overseas amounted to nearly 2,500 million marks in 1938. Total imports in that year amounted to 5,443 million marks.



for instance, the Netherlands Indies). The blocking of Japanese credits and bank balances which this order involved would have made practically all Japanese purchases in these countries impossible, and would thus at once have paralysed Japan's foreign trade. However, the administration of the freezing control was rendered flexible, and was left to depend on the further development of Japanese policy. The freezing system introduced in the United States, the British Commonwealth and the Netherlands Indies meant in practice that every individual monetary transaction with Japan required a Government licence; and a licence was only issued when the transaction was in accord with Government policy. The actual effect of this control on the volume of trade cannot yet be statistically measured. But it is clear that the system represents a powerful instrument of international economic control.

At the request of the Chinese Government, the freezing and licensing procedure was extended to Chinese assets. The object of this measure was in the first place to help China to check the flight of domestic capital and, secondly, to close up certain indirect channels through which the Japanese had been obtaining foreign exchange at China's expense. These two problems, as was seen in Chapter V, had engaged the attention of the Chinese exchange authorities for years. The official announcement issued in the United States on July 25th stated that "the administration of the licensing system with respect to Chinese assets will be conducted with a view to strengthening the foreign trade and exchange position of the Chinese Government".

\* \* \*

War necessarily involves a disruption of economic as of other forms of international intercourse. Thus between Continental Europe and the outside world a barrier has been created, especially since the events of 1940; and economic developments in the two areas, as the earlier chapters in this volume have shown, have taken in many respects a different course. The disruption was carried further by the outbreak of war between Germany and the Soviet Union. In the Far East, an economic barrier has been set up—a potential barrier at any rate—to check Japan's policy of military expansion.

But there are factors on the other side of the account. There has been a progressive drawing together and an intensification of economic intercourse in the other areas of the world—areas which, by their size and resources, represent by far the greater part of the world's economic activity.

This *Survey* has repeatedly drawn attention to the somewhat exceptional position of Latin America and particularly to the dif-

ficulties that arose in this region through the loss of European markets and the consequent depression of prices and accumulation of surplus stocks. From the latest available data, however, it would appear that the situation in Latin America has materially improved. This improvement is no doubt largely attributable to the striking growth of imports into the United States, accompanying the expansion of industrial production. The quarterly movement of United States merchandise imports, in millions of dollars, has recently been as follows:

*United States: Imports and Industrial Production.*

	1939				1940				1941	
U.S.A.:	I	II	III	IV	I	II	III	IV	I	II
\$(000,000's)										
Value of imports .....	526	567	527	697	659	634	648	684	731	865
Indices, 1938 = 100:										
Value of imports .....	107	116	108	142	134	129	132	140	149	177
Industrial production	115	112	122	141	133	132	139	152	160	169

Thus in the second quarter of 1941 the value of imports into the United States was 37% greater than in the second quarter of 1940. Imports from Latin America, amounting to \$271 million in the second quarter of 1941, were 76% larger than in the corresponding period of 1940. The following table shows the percentage changes in the dollar value of United States imports from some of the Latin-American countries between the second quarter of 1940 and the second quarter of 1941:

Argentina .....	+ 180%	Mexico .....	+ 69%
Uruguay .....	+ 164%	Cuba .....	+ 56%
Chile .....	+ 120%	Colombia .....	+ 36%
Ecuador .....	+ 90%	Peru .....	+ 29%
Brazil .....	+ 85%	Venezuela .....	+ 6%

Thus the expansion of imports into the United States, a natural consequence of the progressive expansion of industrial activity in that country, has tended more and more to compensate Latin America for the loss of European outlets. The physical volume of Argentine exports, for example, has shown a steady recovery from the low point of February 1941, accompanied by a similar recovery in export prices. In Latin America generally, wholesale prices have shown a tendency to recover as a result of the improved demand for export products. The Argentine, indeed, has been in a position to effect a sweeping relaxation of her import and exchange control as from July 1st: the Exchange Control Office has been liquidated and the

system of "prior permits" for the allocation of foreign exchange has been abolished, affecting about 85% of total imports and especially imports from the United States.

\* \* \*

What this *Survey* has mainly been tracing is the shift from welfare economy to war economy and especially the organization of production and distribution of goods by the State. In the countries most directly involved in the struggle, this organization is now largely perfected: the mobilization of resources and their diversion to the purposes of war have been pushed to a degree never conceived of before. In other parts of the world, an earlier stage of evolution has been reached. As was shown in Chapter IV, the proportion of national income devoted to national defence in the United States is much lower than in the principal belligerent countries. By July 1941, industrial production in the United States had left all previous levels far behind and exceeded that of 1929 by 47%. The great increase in armament production has been accompanied by a rise in consumption. Civilian consumption in the United States was in fact at a record level in the summer of this year.<sup>1</sup> But the situation is evolving rapidly. An economy with a large unused capacity of production has turned almost overnight into an economy where conditions of scarcity and full employment predominate and where the problem of diversion is making itself daily more keenly felt.

Economic policy in the United States has taken account of this evolution. The summer of 1941 was a period of great legislative and administrative activity. A new tax bill was submitted to Congress, providing for a drastic increase in taxation to reduce consumers' purchasing power. Congress was also working on a bill aiming at a strict control of prices. Regulations were issued to curtail consumers' instalment credit, raising the minimum down payment to 33% and limiting the credit period to 18 months. An Economic Defense Board was set up, headed by the Vice-President, to guide the activities of Federal agencies especially in the international aspects of economic defence, to protect the trade of the United States and, eventually, to expedite the reestablishment of international economic relationships after the war. At the end of August, the administrative machinery of defence economy was reorganized. The President set up a Supply Priorities and Allocations Board under the chairmanship of the Vice-President with a view to speeding up the production of arms

<sup>1</sup> Cf. *Survey of Current Business* (U.S. Department of Commerce). June 1941, page 5.

for the United States, Great Britain, China, Russia and other nations resisting aggression. The new board received extensive powers to fix priorities and to allocate the supply of materials, fuel, power and other resources. In addition to the Vice-President, the Board includes the two directors of the Office of Production Management, the Federal price administrator, the administrator of the lend-lease programme, the Secretary of War and the Secretary of the Navy.

The production of arms for nations resisting aggression was one aspect of the problem. Another was to secure the transport of the goods to their destination. In the spring of 1941, new measures were decided upon in the United States to ensure the delivery of goods consigned to Great Britain and to solve the vital problem of shipping. A system of Atlantic patrol was instituted by the United States Navy, and the occupation of Iceland, announced on July 7th, led to a further extension of such activity.

In consequence, there has been a considerable improvement in the British shipping situation. As was shown in the preceding chapter, shipping losses fell off substantially in June. Publication of the monthly figures has now been suspended, but it has been officially indicated that British and allied shipping losses continued to decline after June.

Thus the flow of supplies required for the British war effort has materially increased. The administrator of the United States lend-lease programme, speaking in London at the end of July, referred to "the endless assembly belt" that "stretches from our western coast to this island and to the Middle East."<sup>1</sup>

But Anglo-American co-operation, which manifested itself in the Far East as well as on the Atlantic, has not been confined to matters of war economy. Consideration has also been given to problems of post-war reconstruction. At the Atlantic conference held between the President of the United States and the Prime Minister of Great Britain in August, a declaration was issued in which the basic principles of economic as well as political reconstruction were briefly laid down. This volume may fittingly close with a textual reproduction of the official statement :

"The President of the United States of America and the Prime Minister, Mr. Churchill, representing His Majesty's Government in the United Kingdom, being met together, deem it right to make known certain common principles in the national policies of their respective countries on which they base their hopes for a better future for the world.

<sup>1</sup> Cf. *The Times* (London), July 29th, 1941.

“FIRST, their countries seek no aggrandizement, territorial or other;

“SECOND, they desire to see no territorial changes that do not accord with the freely expressed wishes of the people concerned;

“THIRD, they respect the right of all peoples to choose the form of government under which they will live; and they wish to see sovereign rights and self government restored to those who have been forcibly deprived of them;

“FOURTH, they will endeavour, with due respect for their existing obligations, to further the enjoyment by all States, great or small, victor or vanquished, of access, on equal terms, to the trade and to the raw materials of the world which are needed for their economic prosperity;

“FIFTH, they desire to bring about the fullest collaboration between all nations in the economic field with the object of securing, for all, improved labour standards, economic adjustments and social security;

“SIXTH, after the final destruction of the Nazi tyranny, they hope to see established a peace which will afford to all nations the means of dwelling in safety within their own boundaries, and which will afford assurance that all the men in all the lands may live out their lives in freedom from fear and want;

“SEVENTH, such a peace should enable all men to traverse the high seas and oceans without hindrance;

“EIGHTH, they believe that all of the nations of the world, for realistic as well as spiritual reasons, must come to the abandonment of the use of force. Since no future peace can be maintained if land, sea or air armaments continue to be employed by nations which threaten, or may threaten, aggression outside of their frontiers, they believe, pending the establishment of a wider and permanent system of general security, that the disarmament of such nations is essential. They will likewise aid and encourage all other practicable measures which will lighten for peace-loving peoples the crushing burden of armaments.”

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